Summary of Community Involvement Activities GE Morris Site, Illinois

April 2007

GNEP ENVIRONMENTAL STUDY
Summary of Community Involvement Activities

April 2007

Morris, Illinois Site

Disclaimer:

Background and Discussion

In September 2006, GE proposed the use of its Morris, IL site for use in the DOE Global Nuclear Energy Partnership (GNEP). The proposal was to perform a detailed site study on the existing fuel storage facility to determine the suitability of placing both the Consolidated Fuel Treatment Facility (CFTC) and Advanced Recycle Reactor (ARR) at the GE Morris Site. Included in the scope of work was a community involvement activity to communicate GE's vision to the local community and understand potential issues the community may have with the proposal. Establishing a strong base of support in the State of Illinois is critical to achieving GE's vision for the GE Morris Site as one of the locations for the DOE's Global Nuclear Energy Partnership ARR and CFTC. Support from the community cannot rest simply around the existing GE Morris Site and its current acceptance, but must encompass the whole state. The challenge of forging support for the GNEP initiative is accentuated by the existence of distinct regions; northern Illinois, which looks eastward to Chicago (considered a major market unto itself); south central Illinois; and western Illinois, each populated with primarily small cities and communities.

Considerations and Approaches to Communications

The strategic communications document guided activities before and during the siting study, and will require refreshment as GE further develops its plans under GNEP.

Governing Communications Principles:

- Speak plainly about the GE Morris Site and nuclear energy in general. Use everyday language and avoid jargon and acronyms.
- Address our intent honestly.
- Treat stakeholders with respect, even when they disagree with GE or DOE policies, positions and decisions, and our proposed deployment.
- Humanize sensitive issues and especially the responses from the public.

Communicate Goals and Objectives

- De-mystify GNEP and GE's *possible* role;
- Create and advance public trust and confidence in GE-Morris, its past mission, its current mission, and our possible solutions role in the future;
- Show how success will influence the global/national energy agenda;
- Position the Morris site as an asset to Illinois and the region.

Build Relationships with Key Allies and Constituencies:

- State and regional elected and civic leaders in Illinois
- Electric utilities and related industries
- Academia/scientific community
- The national laboratories and key professional societies
- Maintain an ongoing dialog with critics in the region

Strategic Messages
The four key messages that characterized our communications were intended to inform the audience of DOE's GNEP vision and core GE values. All communications were intended to directly support one or more of these four messages in fact, tone, and vision. These key messages serve as cornerstones for building communications with impact for a long-range GNEP deployment. These messages are:

- GE is working diligently to demonstrate an economic solution to recycle spent nuclear fuel using our PRISM technology and pyro processing.
- The GE Morris Site, because of its physical assets, can lead the world in the demonstration of the safe recycle of spent nuclear fuel as a domestic energy source. In addition, communicate that the site will be upgraded using a process that reduces the long-term toxicity and reduces the volume of Spent Nuclear Fuel (SNF) that requires long-term underground storage.
- GE is expanding our world-class capabilities and collaborative partnerships in the nuclear arena to support the government's Global Nuclear Energy Partnership program.
- Foster the convergence of academic, industrial, governmental, and international partners to support the implementation of the proposed technology at the GE Morris Site.

Audiences
The breadth of audience for the GE-GNEP initiative encompasses the globe. Recognizing that a short 90-day plan will focus on immediately recognizable audiences, these audiences must include:

- The government (DOE/NE/NNSA, EPA, NRC, DHS, IEMA).
- The general public, since they represent a controlling constituency interested in increased energy and national security as we seek solutions to the nuclear waste issue.
- Illinois and its elected leadership; legislators, the influential business community, the education community, and the non-governmental organizations (NGOs) both pro and con.
- Local communities around the GE Morris Site; elected officials, local/state political and community organizations, and the NGOs with varying interests and perspectives.

Results of Public Scoping
During the 90-day site characterization study, GE performed extensive public outreach, abiding by the communications strategy outlined above. GE's goal for each public event was to establish open, respectful and value-added relationships and to understand and respond to a range of expectations.

GE sponsored three public scoping meetings, which were held at:

1) University of Illinois, Urbana-Champaign-April 11 (Appendix I)
2) Governor's Office, Springfield, IL- April 24 (Appendix II)
3) Morris, IL –Jennifer's Garden and Banquet Center- April 25 (Appendix III and IV)

In addition, when invited, GE presented to:

1) Village of Coal City, IL - City Council Meeting-Feb 12
2) Morris, IL – City Council Meeting Feb. 20
3) Village of Channahon, IL – Mayor, Emergency Management Coordinator- Feb 27
4) Grundy County Board-Environmental Committee- Feb 27
5) Grundy Economic Development Council (GEDC) Board-March 15
6) NRC RIC Conference March 15
7) NRC Management Meeting March 16
8) Group of Morris residents- March 21
9) Joint Dinner-Chamber of Commerce & GEDC- March 22
10) Coal City Board of Education- April 2
11) Chicago Regional Council of Carpenters- April 5
12) Kiwanis Club-Morris-April 18
13) Congressman Weller's District Director & Communication Director-April 18

GE also participated in a public meeting organized by a group of Morris residents, held on March 28, 2007 at Goose Lake Hall, Morris IL. GE's participation in this meeting demonstrates our commitment to treat stakeholders with respect, even when they disagree with DOE policies, positions and decisions, and our proposed deployment. Participation in this event allowed GE to address our intent honestly and listen to sensitive issues from the public.

At the conclusion of the 90-day site characterization study, GE and its contractors reviewed comments received during public scoping meetings. Comments have been categorized and consolidated by topic. Comments with similar themes were combined to capture the common essential issues raised. The comments fall into several groups that include:

- Security
    - General Site Security
    - Terrorist issues including attack by plane
- Environmental/Public Health
    - Control of waste products to avoid issues similar to those that occurred at West Valley and Hanford
    - Storage and disposal of waste products from process
    - Storage of SNF, do not need more in community
    - Transportation of SNF, do not need to bring SNF from far away places.

- Need to understand impact on human health in the area, especially with respect to cancer.

At the April 25 meeting a straw poll was taken. The crowd was estimated to be between 200 and 300 people with many local elected officials present. One hundred and eighty (180) cards were returned. The results of the poll were as follows:

- I support the GE proposal to use Morris for pyro-processing and PRISM (advanced burner reactor) - 118 (66%)
- I would like more information before making a decision - 15 (8%)
- I do not support the GE proposal to for Morris - 47 (26%)

The community involvement activities were able to successfully communicate the objectives of GNEP and the GE proposal. The audiences were generally supportive of the program and specific proposal. However, the community remains concerned about the issues listed above. GE encouraged the audiences to forward their comments and concerns to the DOE using the PEIS process.

Attachment 1

University of Illinois at Urbana-Champaign

April 11, 2007

GE
Infrastructure

Nuclear Energy

GE's Advance Reactor & Global Nuclear Energy Partnership Vision






Technical Symposium
Wednesday, April 11, 2007, 2 p.m.

Sponsored by:
Department of Nuclear Plasma and Radiological Engineering
University of Illinois at Urbana-Champaign

imagination at work

The Face of GE

Infrastructure

- **Energy**
- **Nuclear**
- Oil & Gas
- Water
- Energy Fin Svcs
- Aircraft Engines
- Rail
- Aviation Fin Svcs

Industrial

- Consumer & Ind.
- Equip Svcs
- Plastics
- Light bulbs
- Security
- Sensing
- Refrigerators
- Dishwashers

NBC Universal

- Network
- Stations
- Entertainment
- Universal
- Sports/Olympics

Healthcare

- Diagnostic Imaging
- Clinical Systems
- Info Technology
- Services
- Bio Sciences

Commercial Financial Services

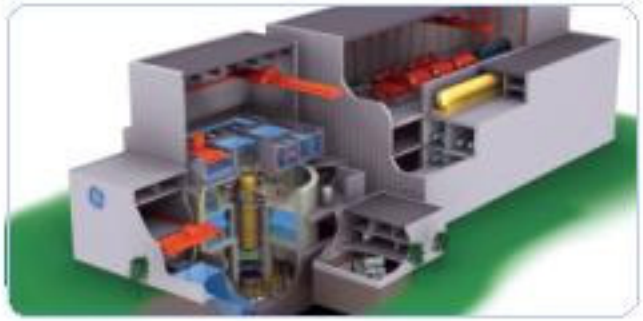
- Insurance
- Leasing
- Real Estate
- Corp Fin Svcs
- Healthcare Fin Svcs

Consumer Finance

- Europe
- Asia
- Americas
- Australia / New Zealand

- **~330,000 employees in 100 + countries**
- **~$163.4B Revenue, $20.7B in Earnings**

GE's Nuclear Business



Nuclear Power Plants

- ABWR
- ESBWR
- Gen IV

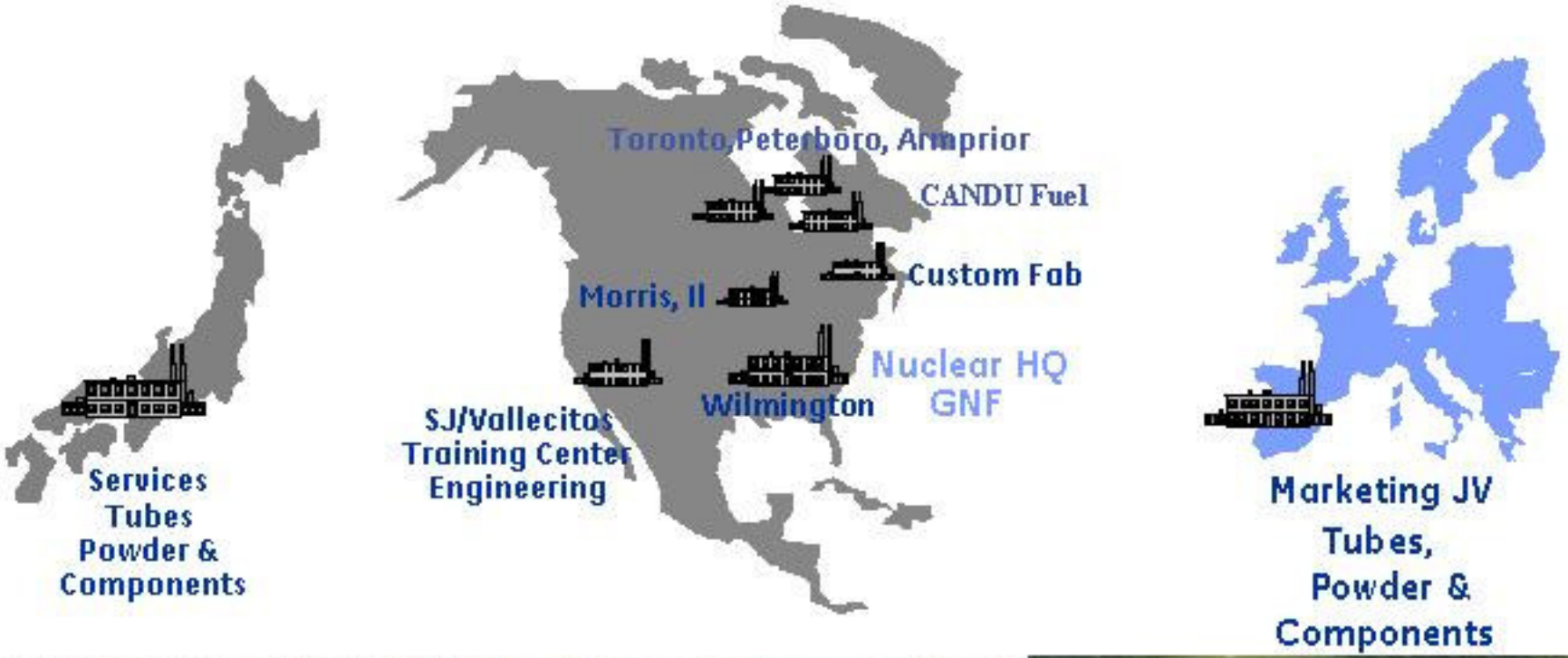
Services

- Reactor & Field Services
- Performance Services
- Isotopes

Fuel

- BWR & MOX Fuel
- Candu Fuel
- Fuel Engineering Services

GE Nuclear's Global Footprint

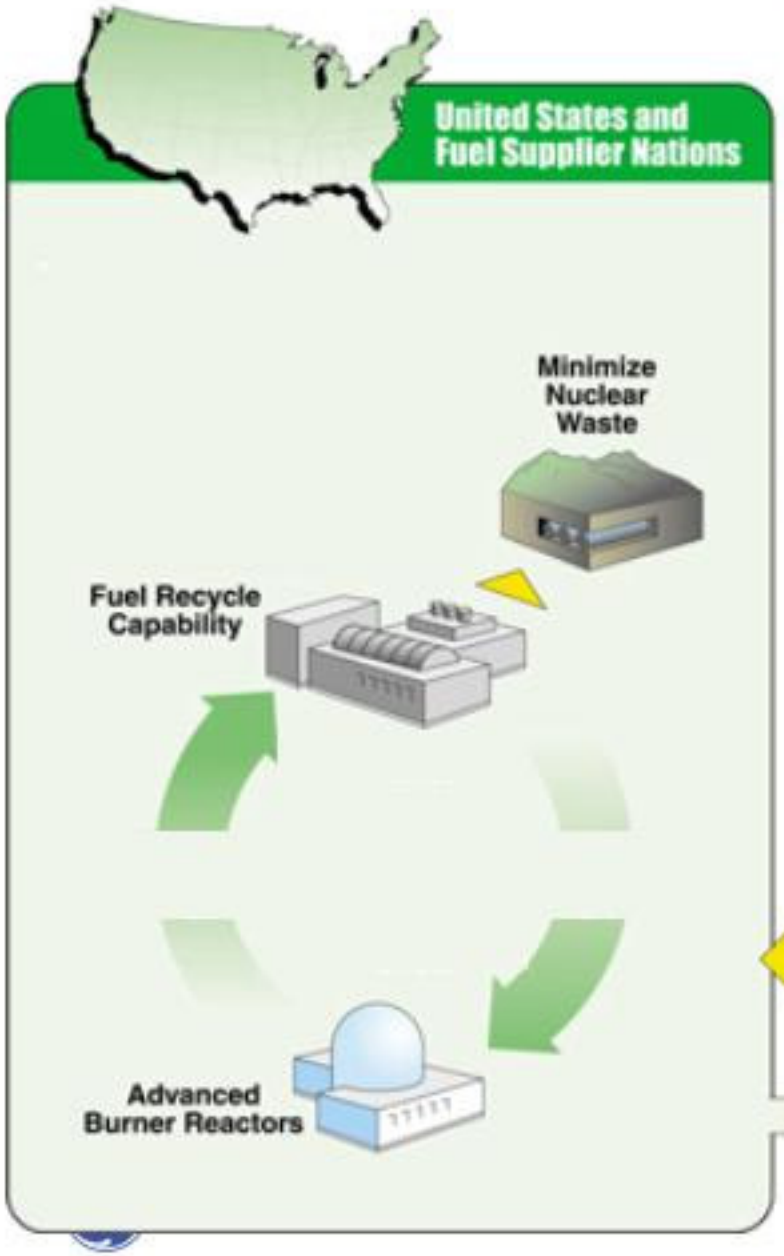


Kurihama, Japan

Wilmington, NC USA

Morris, IL USA

What is GNEP?



Goals:

- "Lots of Nuclear Power" (1000~2000 GW-yr by 2050)
- Manage long-term waste problem
- Reduce proliferation risk

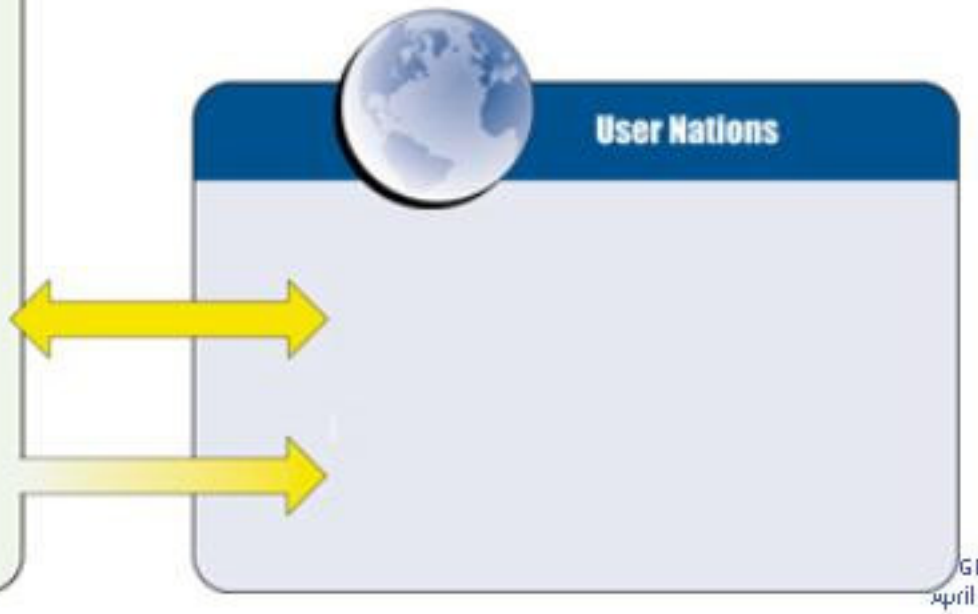
Policy change to favor recycling by "fuel cycle" states

Principles:

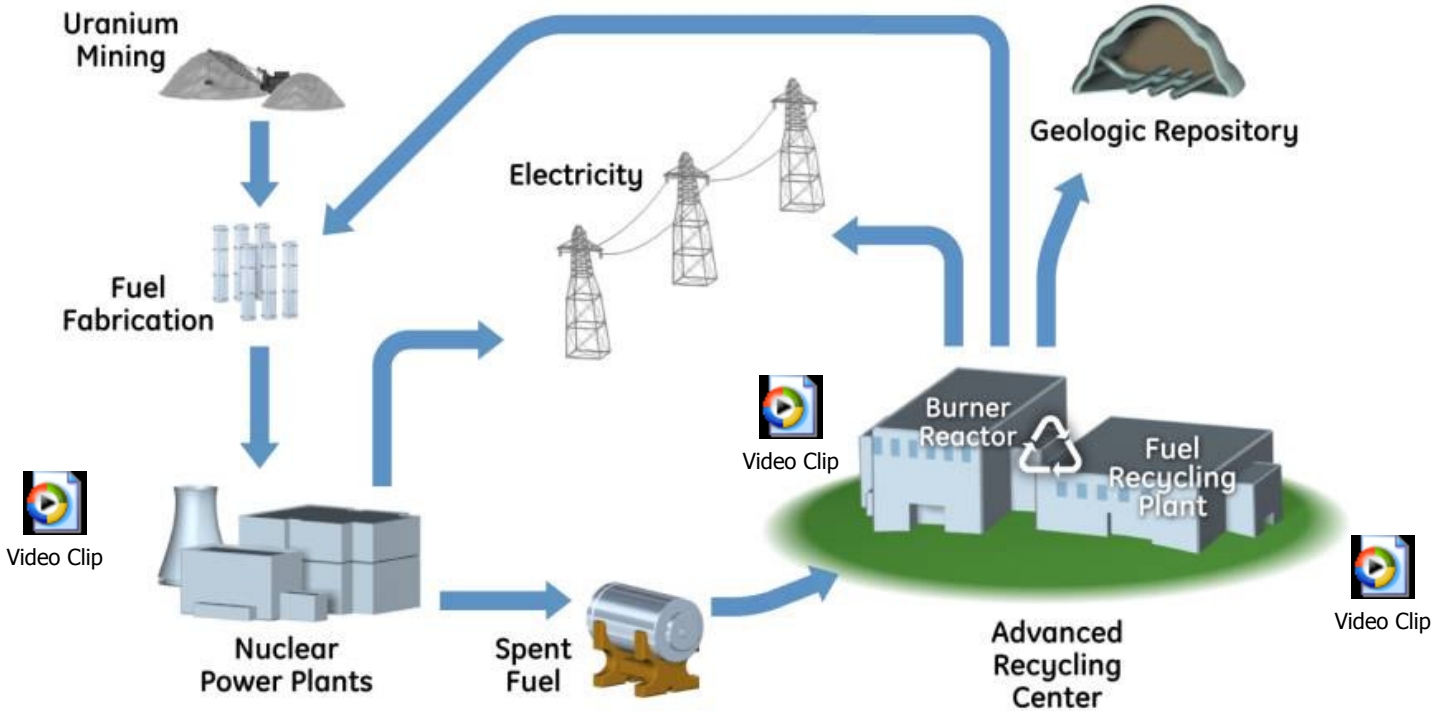
- Global issues require global solutions
- Spent fuel is an **asset** to be managed – not a waste

Program Funding

- FY07 ~$167MM (~$79MM allocated to national labs)
- FY08 ~$395MM requested



GE's Integrated Solution for Closing the Nuclear Fuel Cycle



Advanced Recycling Center (ARC)

Electro-refining…

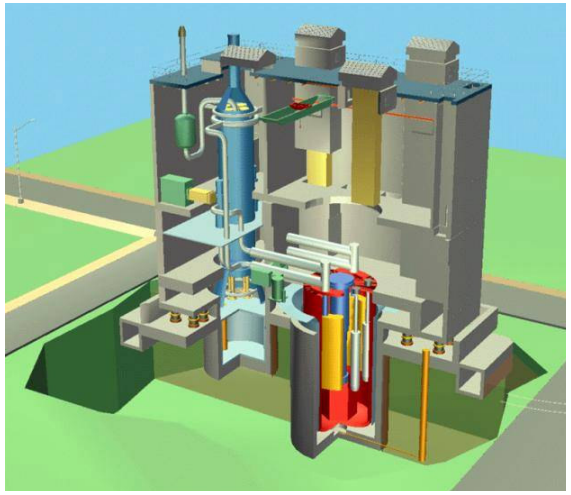
- Ideal for fast reactors and metal fuel
- Removes all actinides together
- Process LWR SNF using proven tech
- Low environmental impact

PRISM…

- Simple Operation
- Highly Reliable and Passively Safe
- Simplified O&M
- Modular/Scalable Deployment

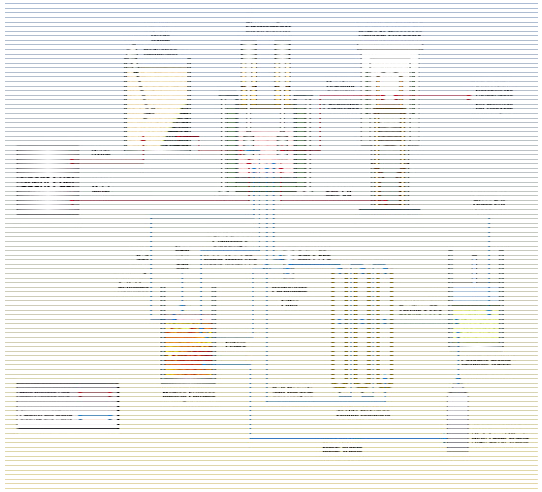
ARC Technology Solution

PRISM



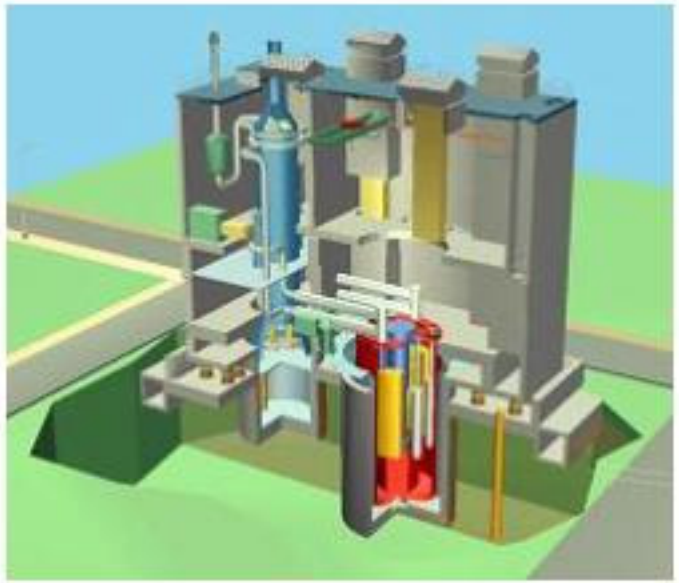
+ 840 MWth & 311 MWe
+ Na cooled fast reactor
+ Passive safety
+ Modular/scalable
+ Factory built
+ Flexible fuel cycle (broad input composition)
+ Metal or oxide fuel (metal pref.)
+ Extensive component testing

Electro Refining



+ Modular/scalable
+ Sized to support ABR
+ Proliferation resistant
+ Removal of volatile FP through voloxidation
+ Continuous or batch process
+ Extensive testing in the U.S., Russia, Japan, and Korea
+ Used by industrial refiners

PRISM: The Advanced Recycling Reactor



✓ **Advanced Conceptual Design**

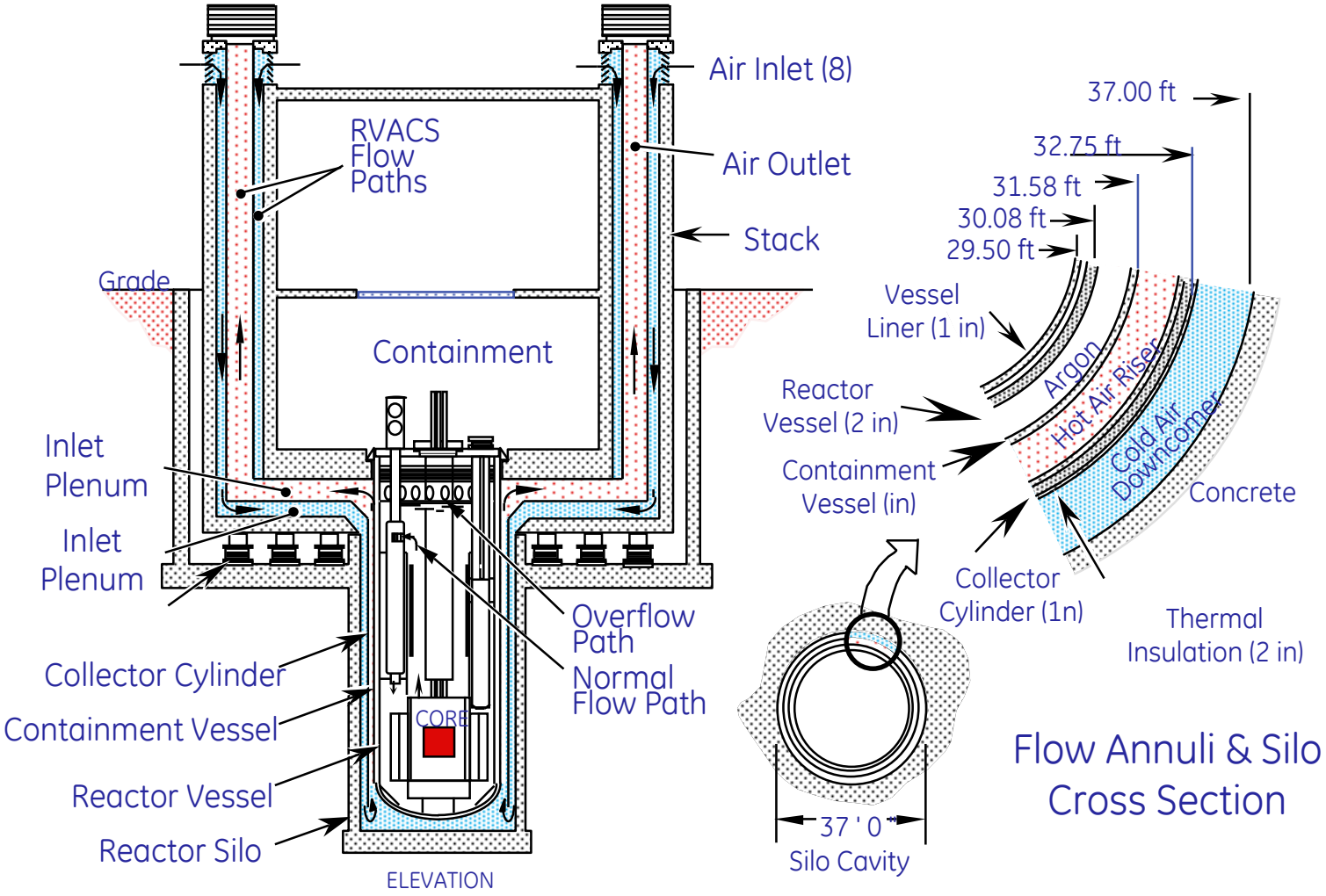
- Already paid for by USG
- Available today
- Spent fuel is an energy asset

✓ **Nuclear Regulatory Commission**

- No obvious impediments to licensing

1981-1984	1985-1987	1988	1989-1995	1995-2002	2007-2014
GE Program	PRISM	PRDA	ALMR	S-PRISM	GNEP
GE funded	DOE funded $30M	DOE funded $5M	DOE funded $42M	GE Funded	

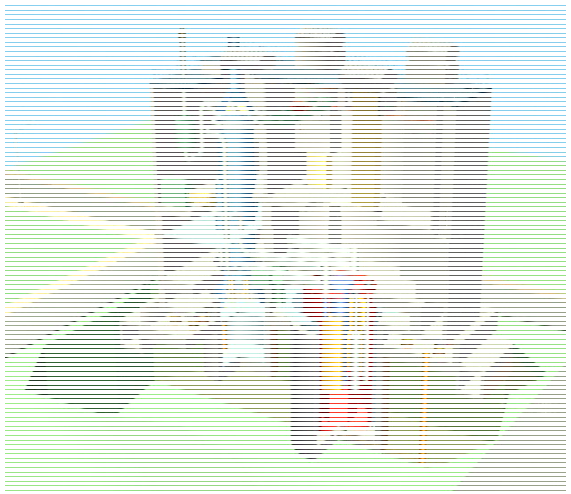
PRISM Reactor Vessel Auxiliary Cooling System



imagination at work

ARC Technology Solution

PRISM



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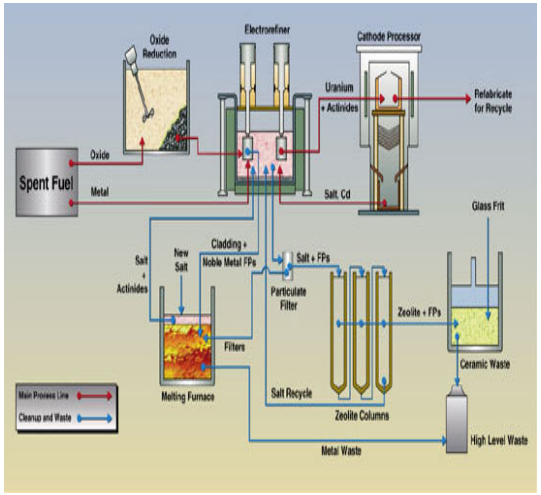
Electro Refining



+ Modular/scalable
+ Sized to support ABR
+ Proliferation resistant
+ Continuous or batch process
+ Extensive testing in the U.S., Russia, Japan, and Korea
+ Low environmental impact

Electro-refining: The Best for Proliferation Resistance

	Weapon Grade Pu	Reactor Grade Pu	Electro-refining
Production	Low burnup PUREX	High burnup PUREX	✓ Fast reactor Pyroprocess
Composition	Pure Pu 94% Pu-239	Pure Pu 65% Pu-fissile	✓ Pu + MA + U 50% Pu-fissile
Thermal power (w/kg)	2 – 3	5 – 10	✓ 80 – 100
Spontaneous neutrons (n/s/g)	60	200	✓ 300,000
Gamma radiation (r/hr at ½ m)	0.2	0.2	✓ 200

The Electrolytic Oxide Reduction Process

Innovative electro-chemical process to convert oxide SNF to metal developed ANL

- Anode process produces oxygen gas which is swept from the cell:

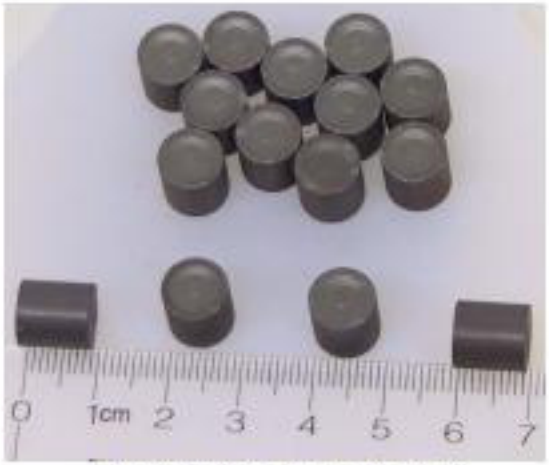
$$2\,O^{2-} = O_2\,(g) + 4\,e^-$$

- Cathode process yields metallic product suitable for electro-refining

$$MO_x\,(s) + 2xe^- = M\,(s) + x\,O^{2-}$$

- LiCl @650°C solvent

Useful for converting oxide SNF from an ABR or LWR including MOX

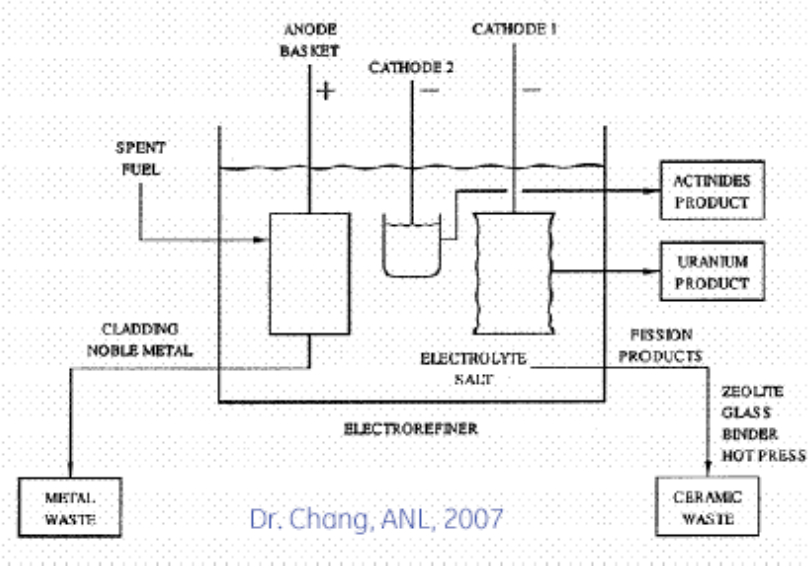


Urania feed material


Reduced product

Advantages of Electro-refining

- **Low environmental impact to process Morris fuel:** adding electrons, releasing oxygen, for the separations process.
- **Compact equipment results:** Improved operations and reliability.
- **Proven Technology**: Processed EBRII fuel in Idaho
- **All actinides (Pu, Np, Am, Cm) are recovered together:** a major non-proliferation advantage.
- **Ideally suited for PRISM fast reactor fuel:** integrated system.



Dr. Chang, ANL, 2007

Siting Grant

$10 million for 11 sites to conduct detailed site study for integrated spent fuel recycling facilities

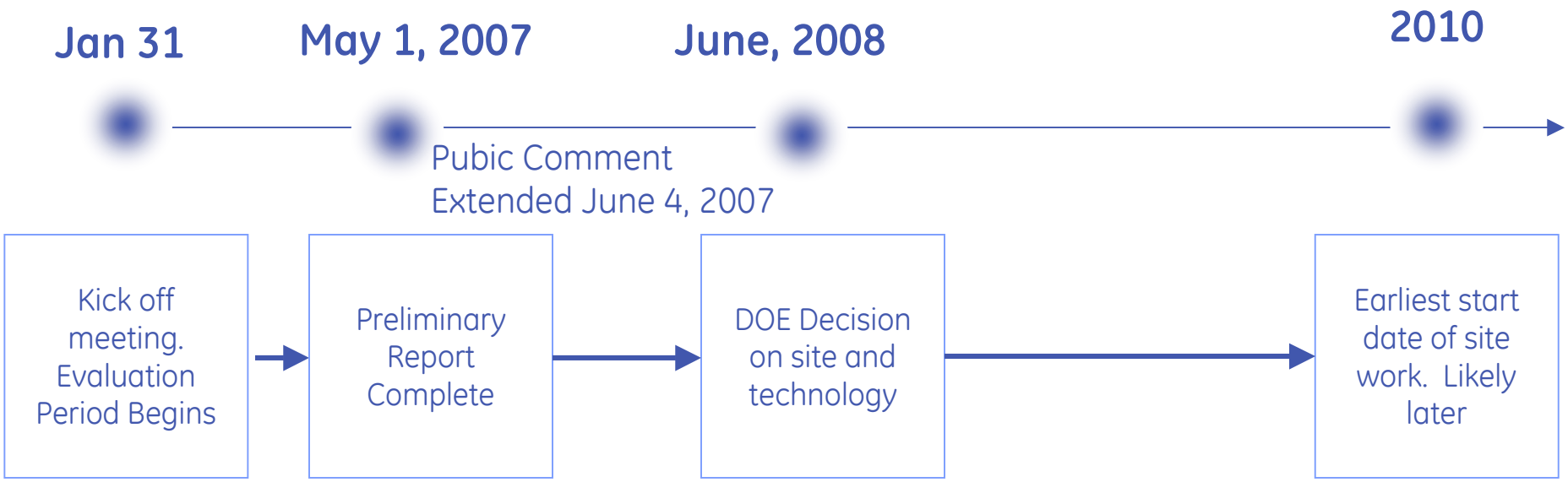
- Determine the possibility of hosting:
  - An advanced nuclear fuel recycling center and/or
  - An advanced burner reactor
- Conduct a detailed 90 day site characterization study and submit the study to DOE
- Information gathered during 90-day study will be used to prepare programmatic environmental impact statement (PEIS), which will evaluate the potential environmental impact for each proposed GNEP facility

16 Environmental Study Topics

1. Maps
2. Aquatic and riparian ecological communities
3. Water resources
4. Important plant and animal habitats
5. Threatened or endangered species
6. Regional demographics
7. Historical, archaeological, and cultural resources
8. Future projects
9. Geology/Seismology
10. Weather/Climatology
11. Hydrology/flooding
12. Site specific regulations and permitting requirements
13. Site specific construction costs
14. Spent nuclear fuel storage capability
15. Other potentially hazardous facilities
16. National Priorities List or the Comprehensive Environmental Response, Compensation and Liability Information System evaluation

High Level Schedule

DOE's schedule



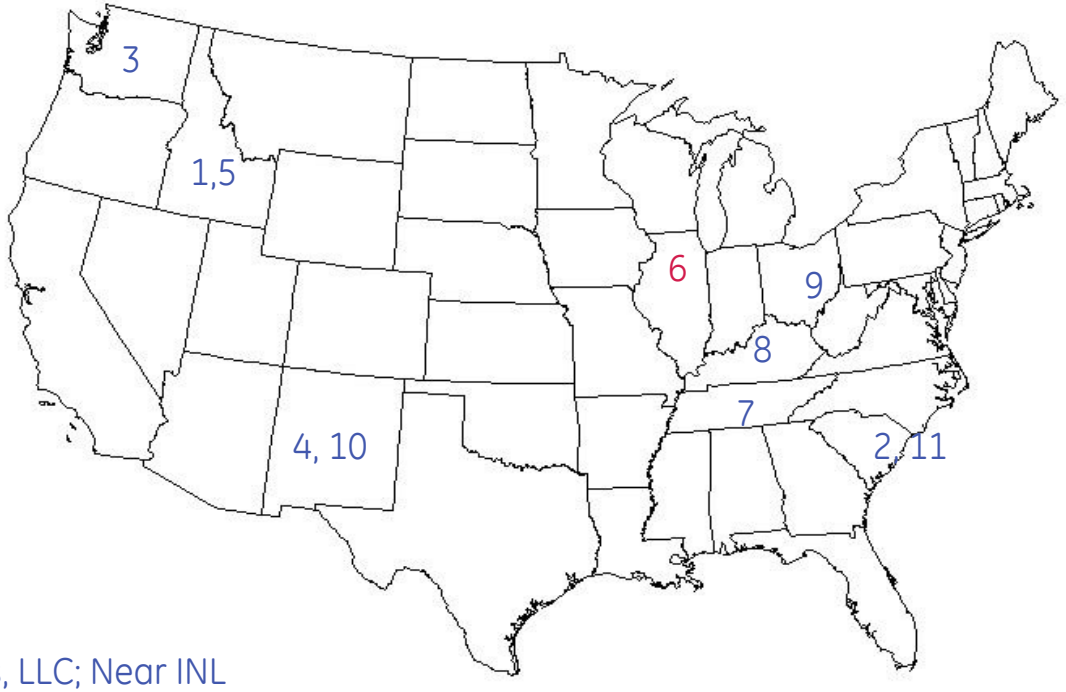
90 days to complete Site Characterization Report

In parallel GE will review:

- Environmentally sound technology
- Potential for future commercial product

GNEP Site Study Locations

6 of 11 sites are owned & operated by DOE



1.	Atomic City, ID;	EnergySolutions, LLC; Near INL
2.	Barnwell, SC;	EnergySolutions, LLC; built not used facility
3.	Hanford Site, WA;	Columbia Basin Consulting Group/Tri-City Ind. Dev Council
4.	Hobbs, NM;	Eddy Lea Energy Alliance
5.	Idaho NL, ID;	Regional Development Alliance, Inc.
6.	**Morris, IL;**	**General Electric Company**
7.	Oak Ridge NL, TN;	Community Reuse Organization of East Tennessee
8.	Paducah GDP, KY;	Paducah Uranium Plant Asset Utilization, Inc.
9.	Portsmouth GDP, OH;	Piketon Initiative for Nuclear Independence, LLC
10.	Roswell, NM;	EnergySolutions, LLC
11.	Savannah River NL, SC;	Eco Dev Partnership of Aiken &Edgefield Counties

NL – National Laboratory
GDP – Gaseous Diffusion Plant

GE's Morris Site

Site Facts…

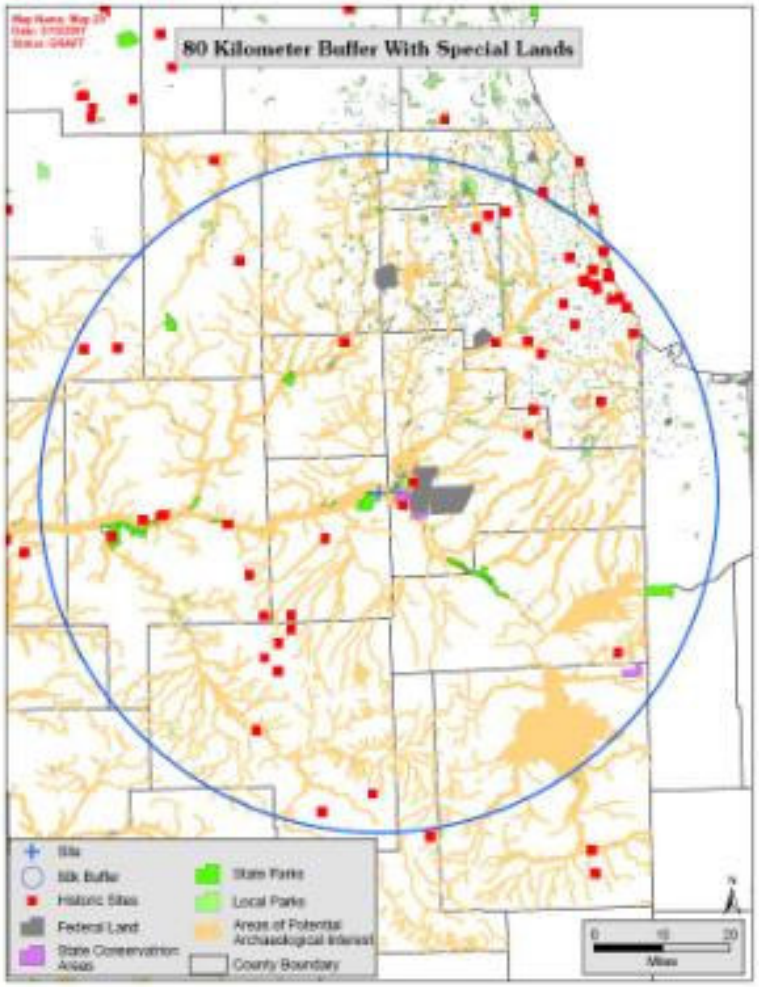
- Located 50 miles southwest of Chicago
- Licensed in 1971 for LWR SNF reprocessing
- Did not operate due to US policy change in late 1970's
- Only licensed away from reactor SNF storage site in the U.S.
- USNRC facility license through 2022

Summary of Environmental Findings

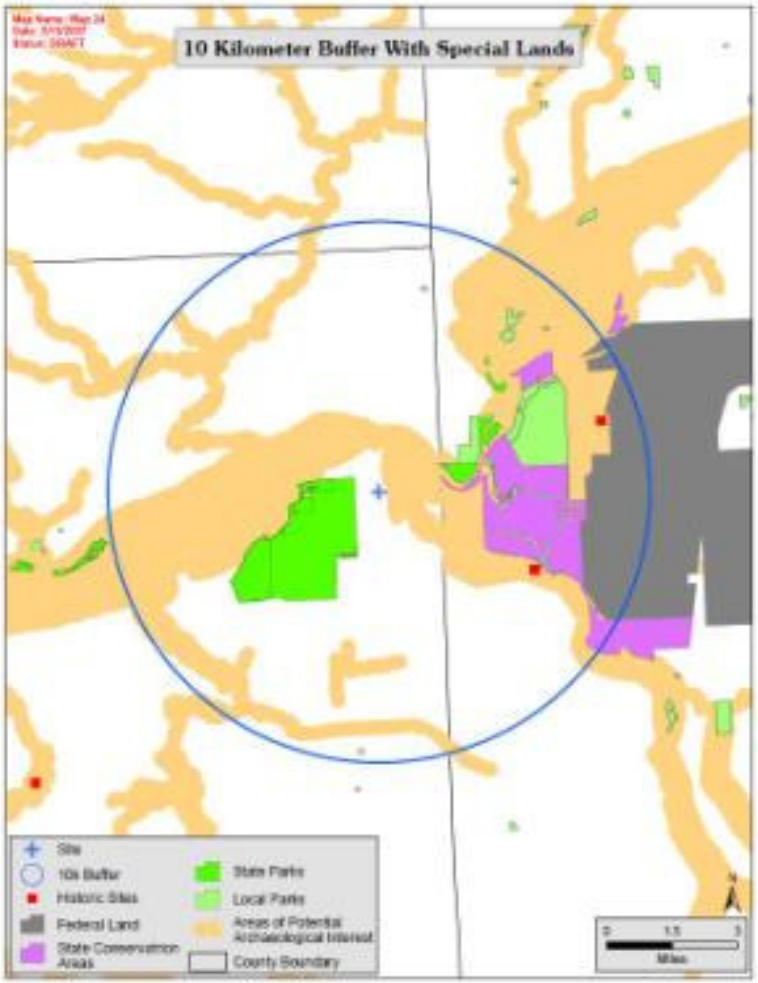
- ✓ No environmental obstacles to the placement of the proposed facilities on the site
- ✓ Strongly supports this site for construction of the proposed GNEP facilities
- ✓ On schedule to provide report to DOE May 1, 2007

1. Maps – Special Lands

80 Kilometer Buffer



10 Kilometer Buffer



1. Maps – Site Parcels and Surrounding Ownership

1. Maps – Transportation Links

Finding: Abundant transportation corridors

Regional

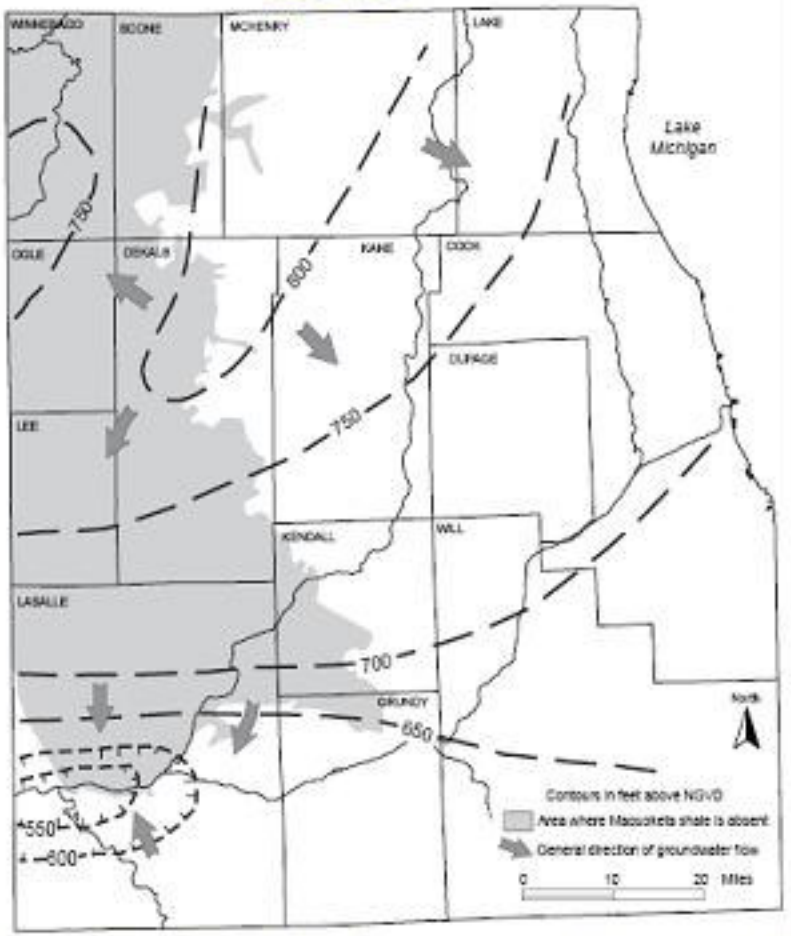
- Two major highways intersect just to NE of the Morris Site
- Extensive rail lines in the area

Local

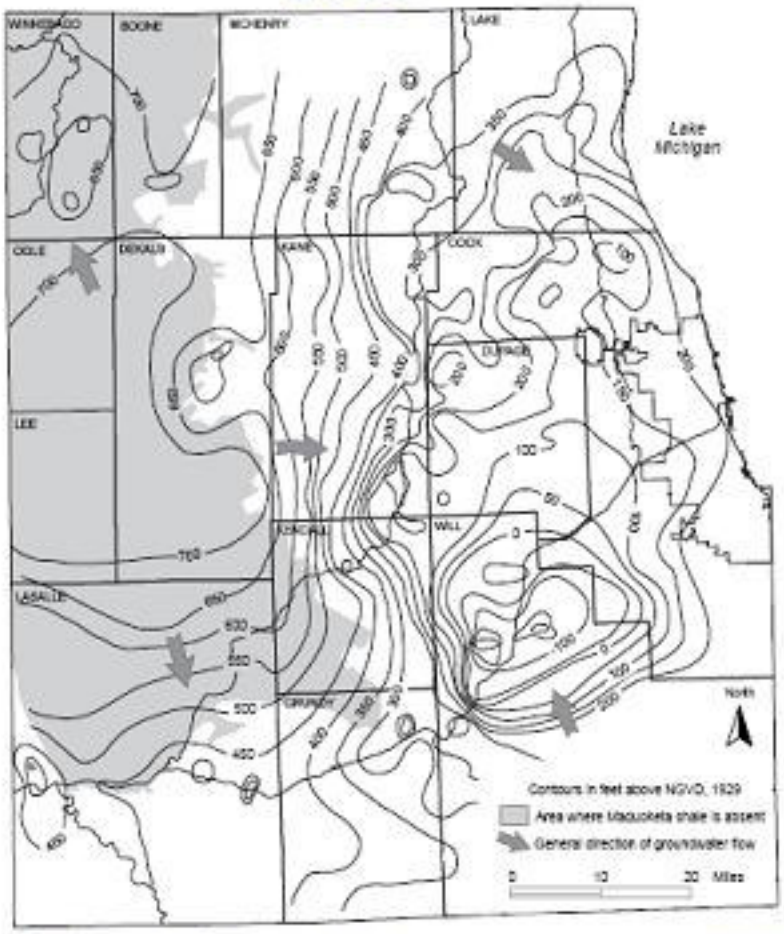
3. Water Resources – Groundwater

Finding: Abundant water is available in the area

1865



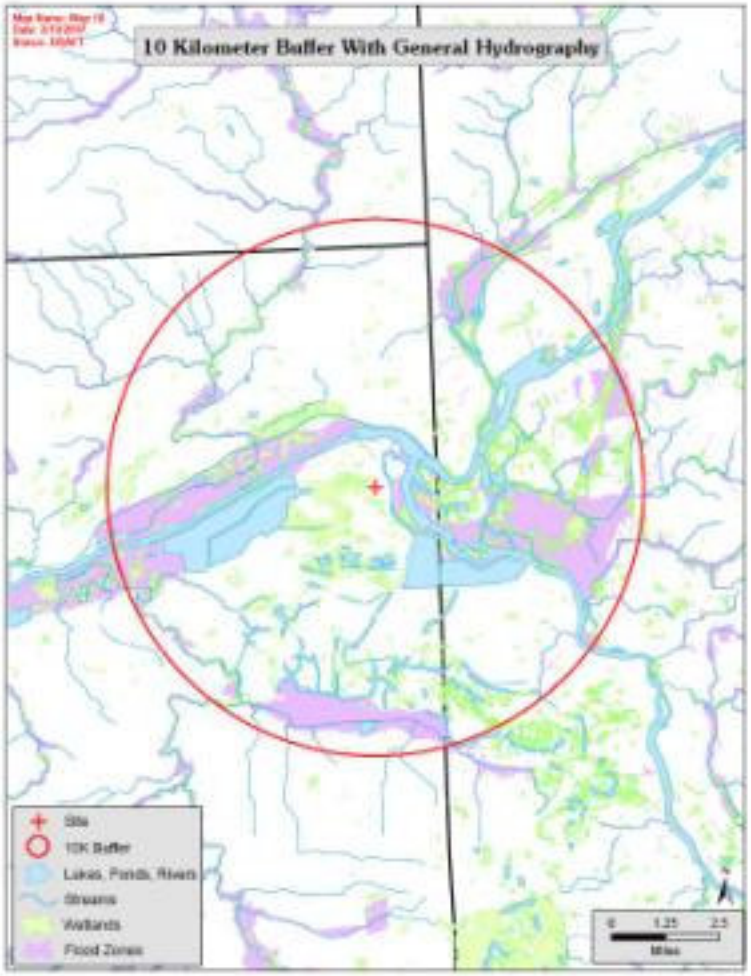
2000



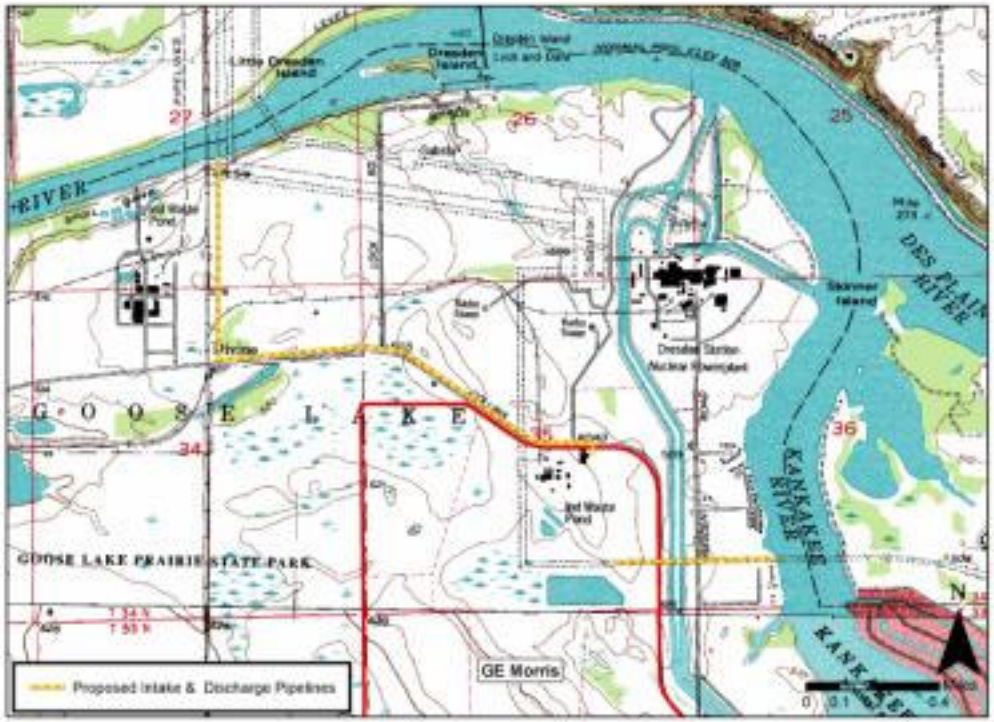
Potentiometric Surface of Deep Bedrock Aquifer System

3. Water Resources – Surface Water

General Hydrography



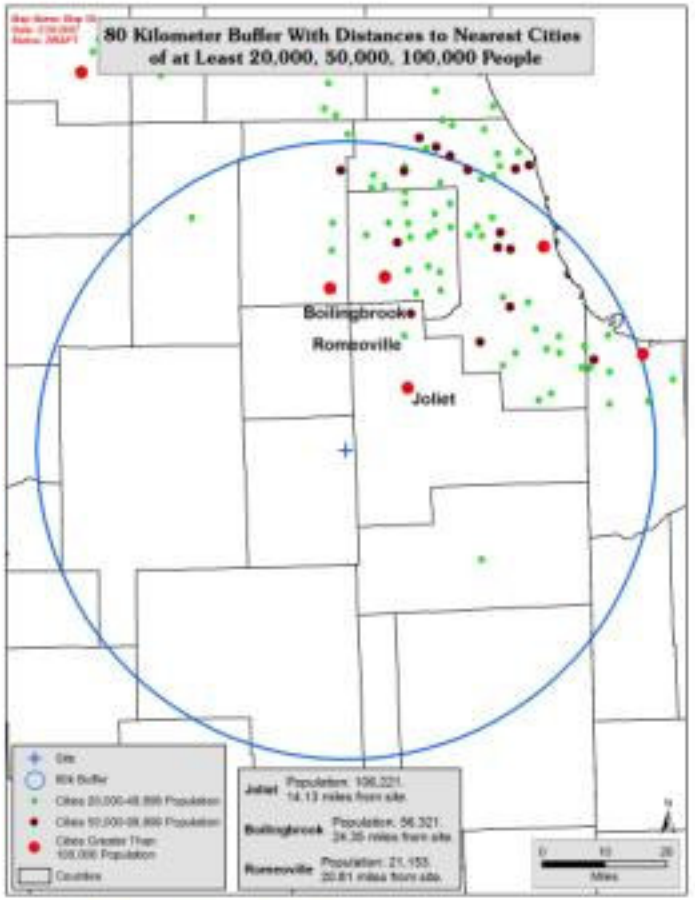
Access Corridors



6. Regional Demography

Finding: Outskirts of a growing area with increasing demand for power

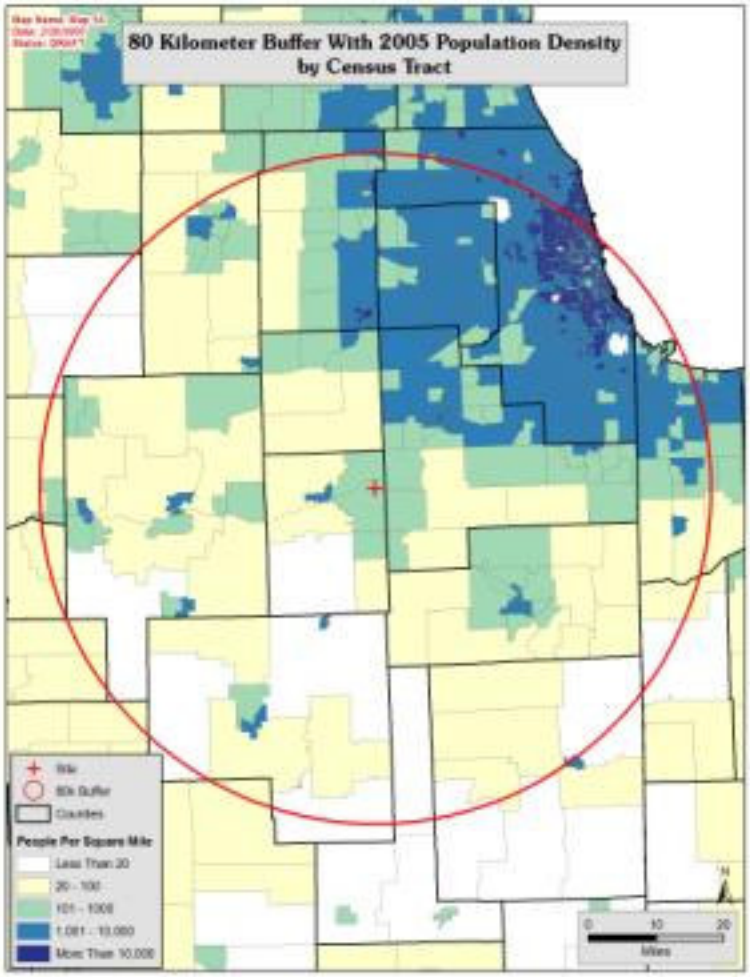
Counties in 80 km Buffer



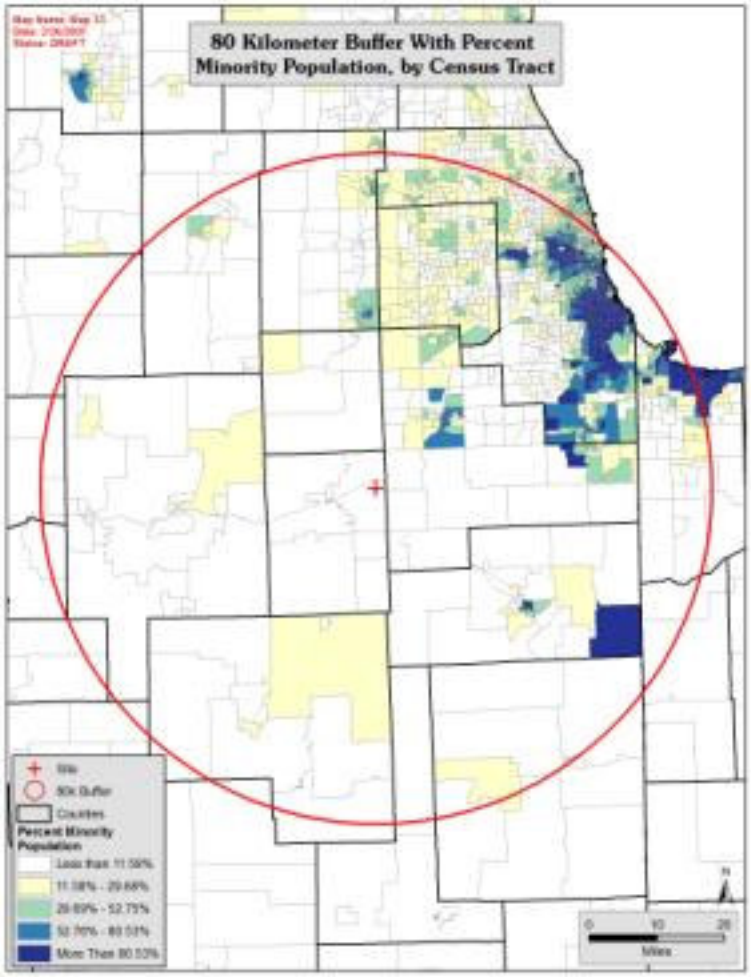
Nearest Cities

6. Regional Demography

Population Density by Census Tract



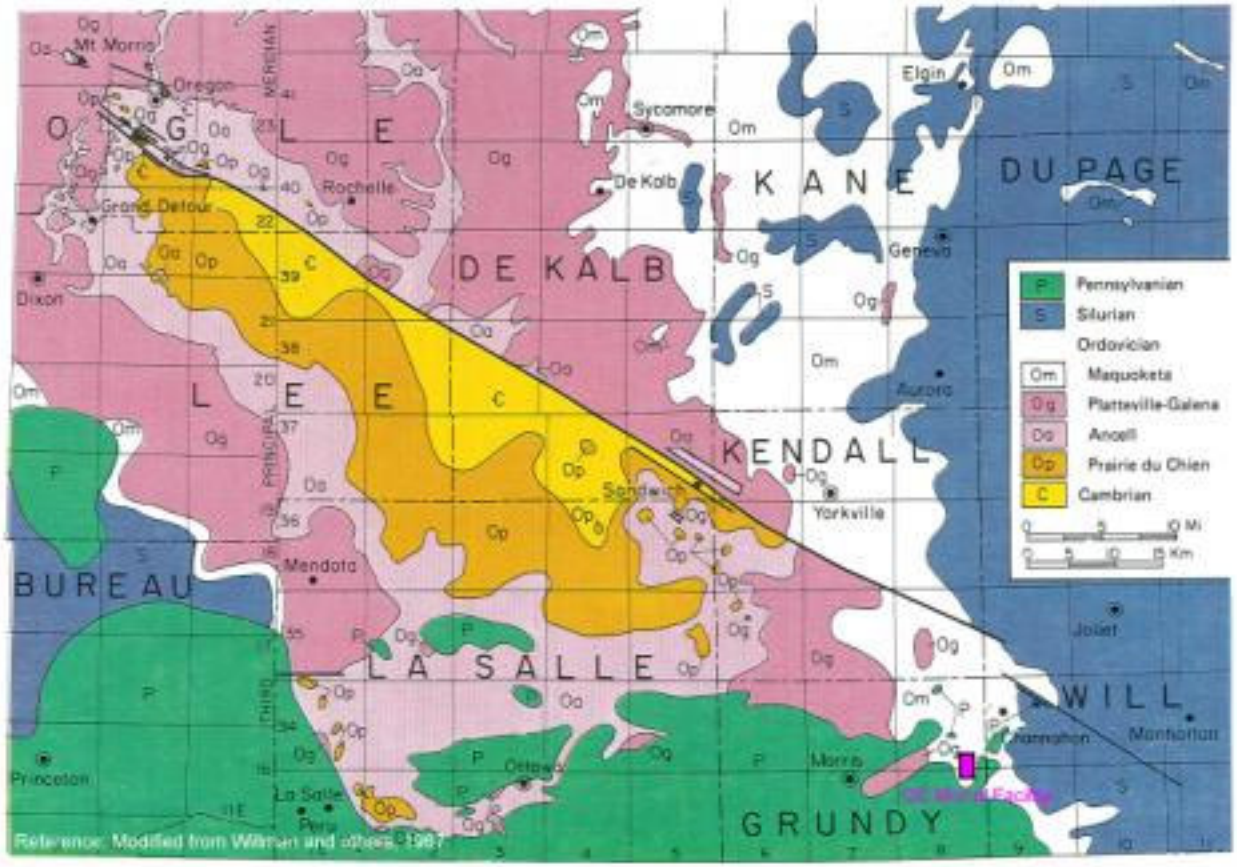
Percent Minority by Census Tract



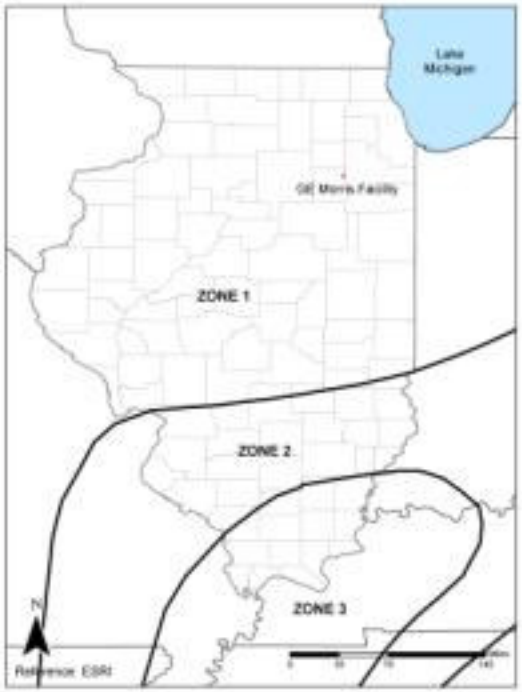
9. Geology/Seismology

Finding: Low seismic risk, stable bedrock

Geologic Sandwich Fault Map



1969 Seismic Risk



10. Weather/Climatology

Findings:

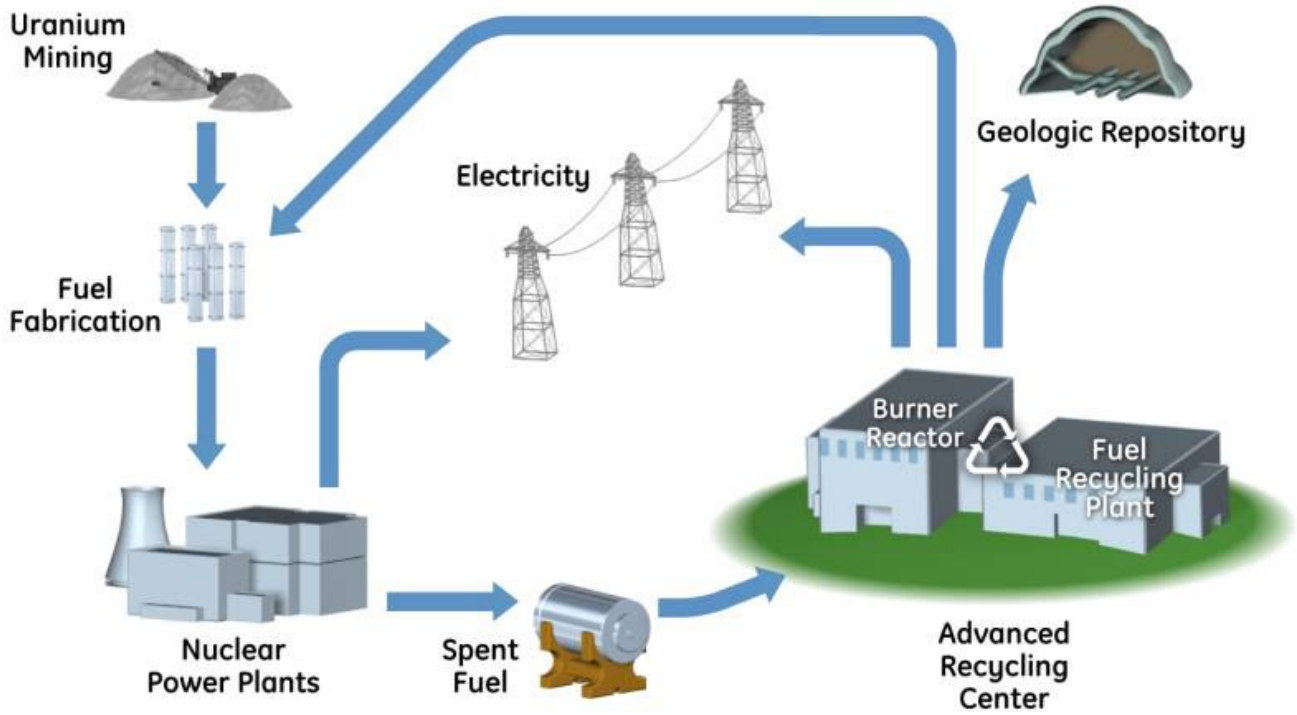
- Not subject to hurricanes or tropical storms
- Regular rain and snowfall provide reliable recharge
- Non-attainment for ozone and particulate matter. Provide power without emitting carbon, ozone or particulate.

GE's Morris Site

Advantages for Deployment…

- Existing NRC license
- Existing infrastructure-pool, canyon
- Existing LWR SNF bundles
- Transportation issues eliminated for demonstration facility
- Located near an area with increasing demand for power
- State of IL has tremendous human resources:
  - -University of Illinois
  - -Argonne National Lab,
  - -Fermi Laboratory
  - -Operating Nuclear Plants
- Provides an environmentally sound site to support an advanced recycling center and advanced reactor

GE's Vision for Morris



Advanced Recycling Center (ARC)

Electro-refining…

- Ideal for fast reactors and metal fuel
- Removes all actinides together
- Process LWR SNF using proven tech
- Low environmental impact

PRISM…

- Simple Operation
- Highly Reliable and Passively Safe
- Simplified O&M
- Modular/Scalable Deployment

Disclaimer

Disclaimer: “This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.”

Attachment 2

Springfield Meeting

April 24, 2007

GE
Energy






Morris Siting Study Update
April 24, 2007
Springfield, Illinois

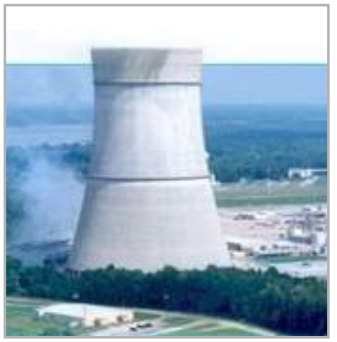
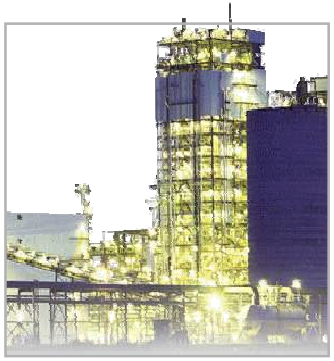
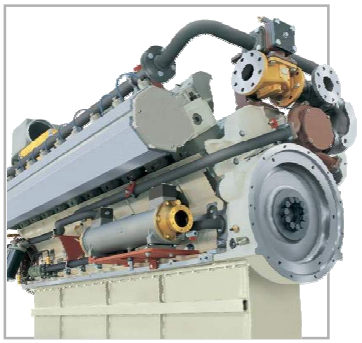
imagination at work

GE Energy

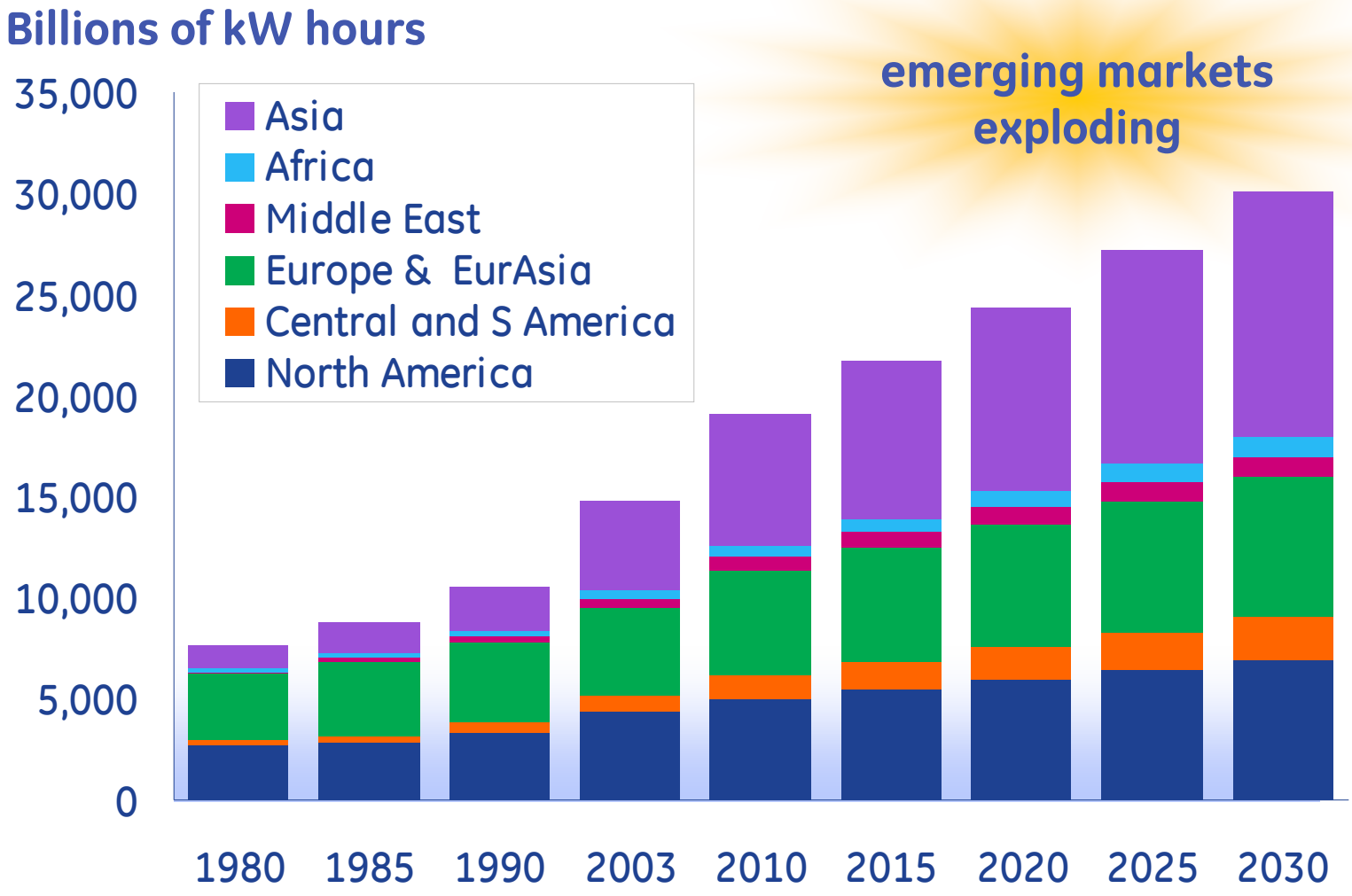
Highlights

- Operating in more than 100 countries … 125+ years
- Over 36,000 employees … ~700 locations

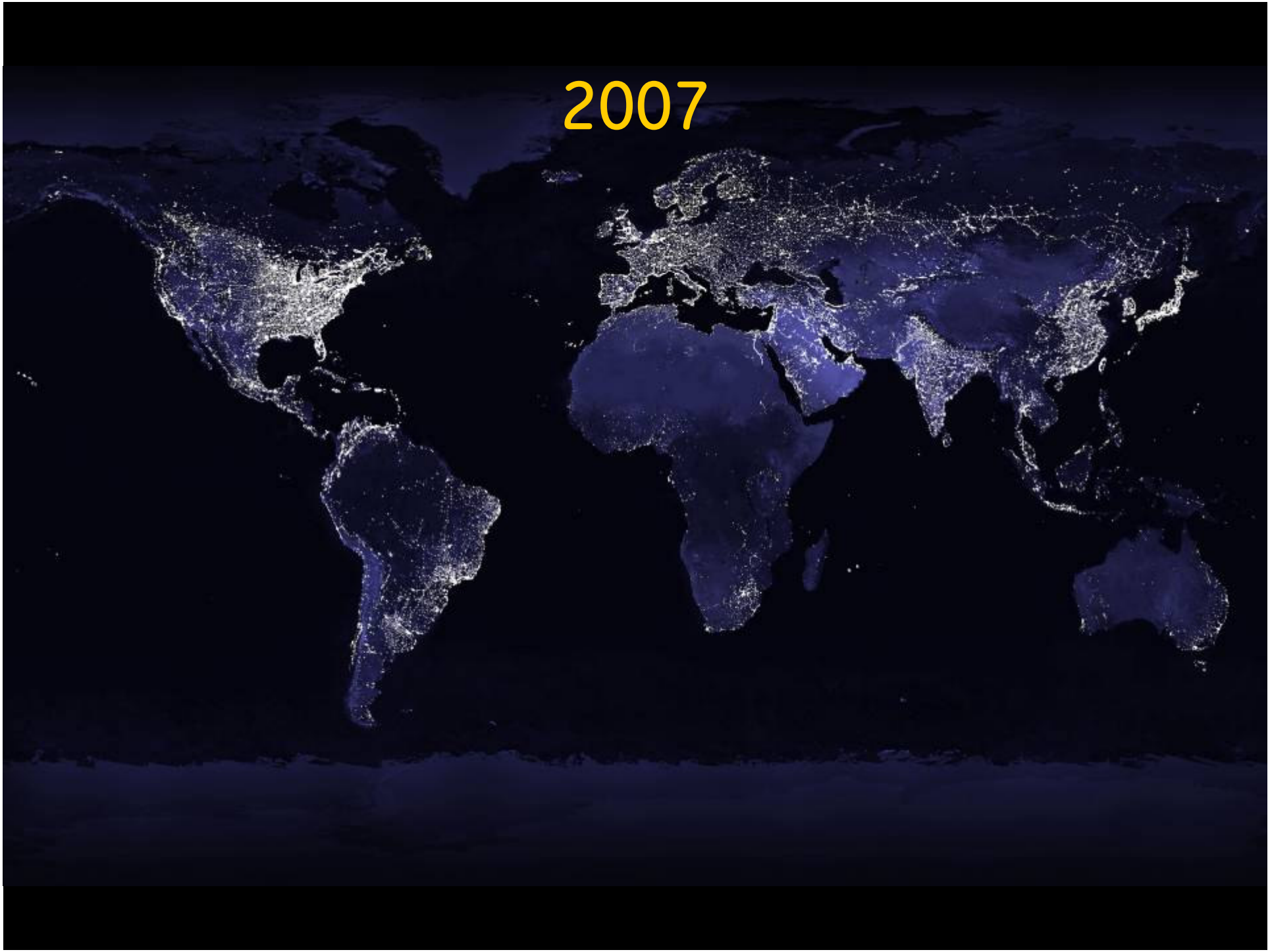


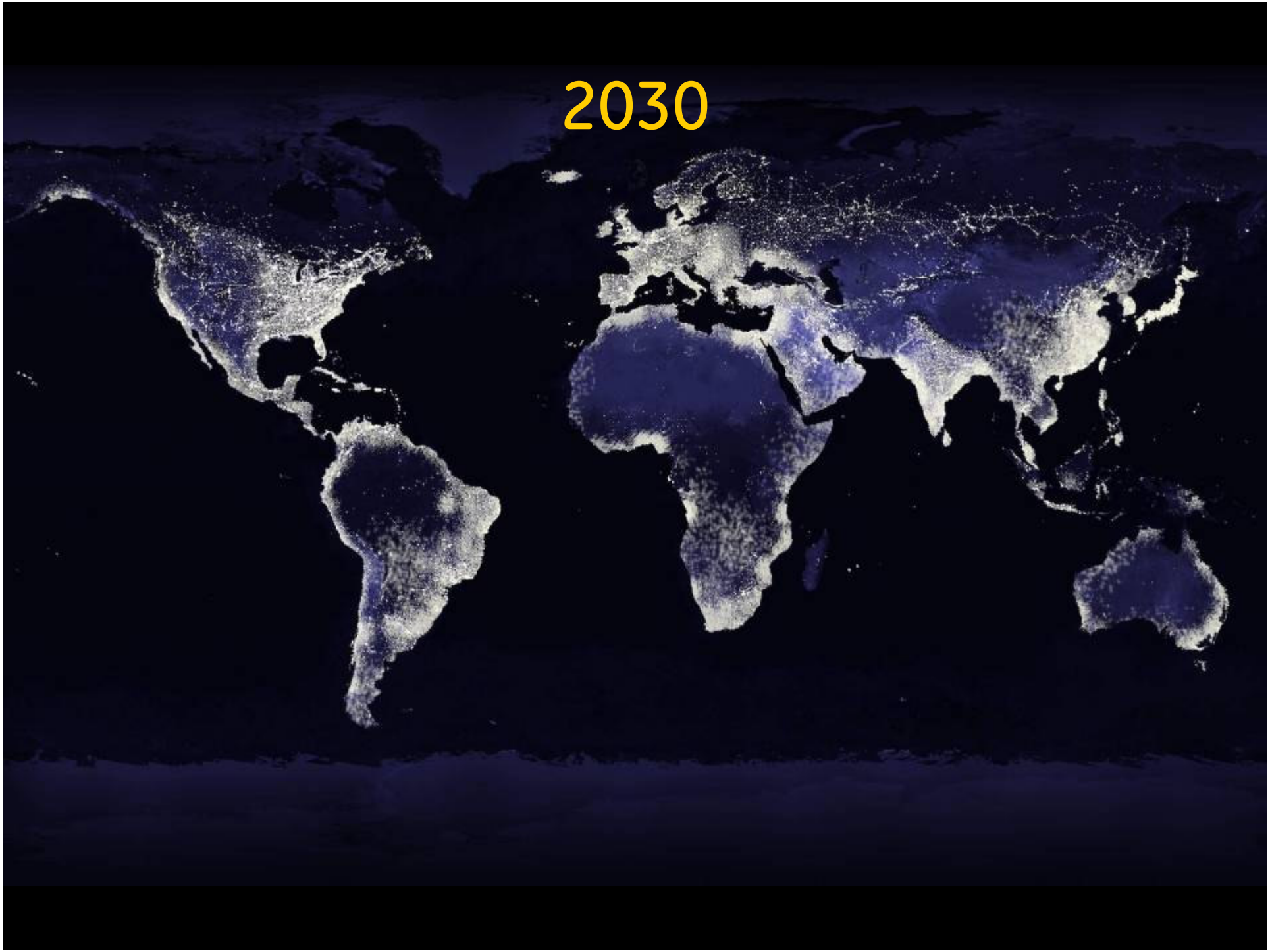





Electricity demand … 2X by 2030



Sources: EIA-DOE International Energy Annual 2004 & International Energy Outlook 2006


2007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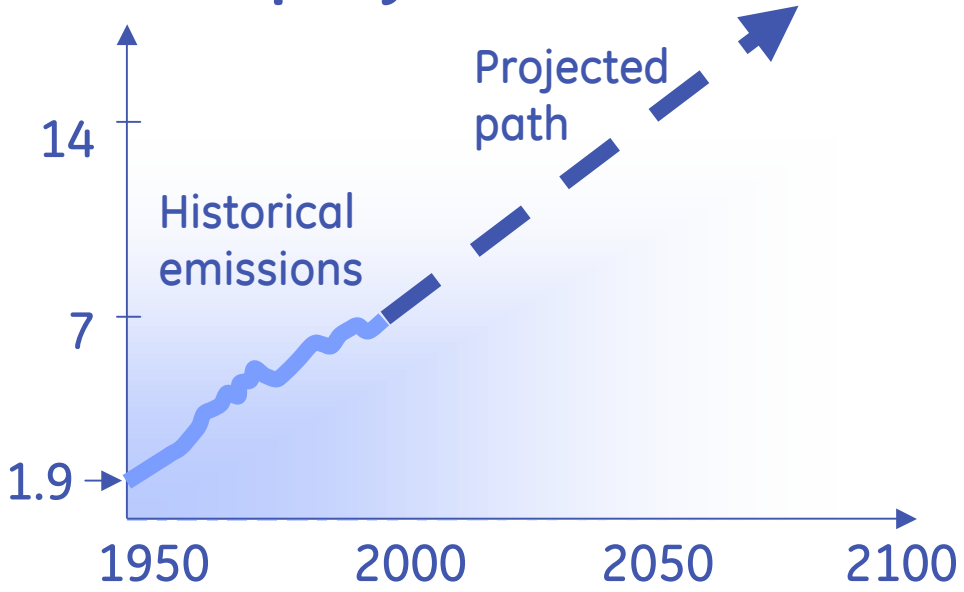
… Sustainable ?

Billions of tons of carbon emitted per year



Source: S. Pacala and R. Socolow (13 August 2004)

GE Energy … power generation platforms

Thermal

- **Gas turbines**
  - Heavy duty (40–500MW)
  - Aeroderivatives (18-100MW)
  - Combined cycle systems
- **Coal**
  - IGCC
  - Steam turbines

Nuclear

- ABWR & ESBWR
- Adv nuclear fuel
- CANDU fuel & services
- Reactor & field services
- Performance services
- Nuclear isotopes

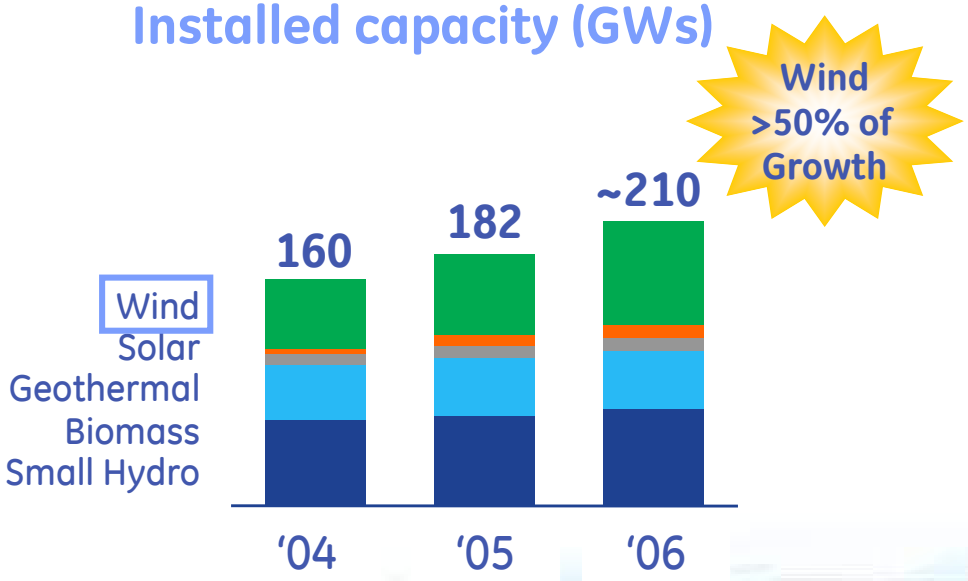
Renewables

- **Wind**
  - Land based
  - Offshore
- **Solar**
  - Grid connected
  - Stand alone
- **Hydrogen**
  - Fuel cells
  - Hybrids
- **Hydro**
  - Large (dams)
  - Small (irrigation)
- **Biomass**
  - Gas engines 0.3-3MW
  - Non natural gas

Growing renewables demand …

- Only 3% of electricity production Global
- <1% of electricity generation in the U.S.
- ~40% global power capital spending

Global renewable Installed capacity (GWs)



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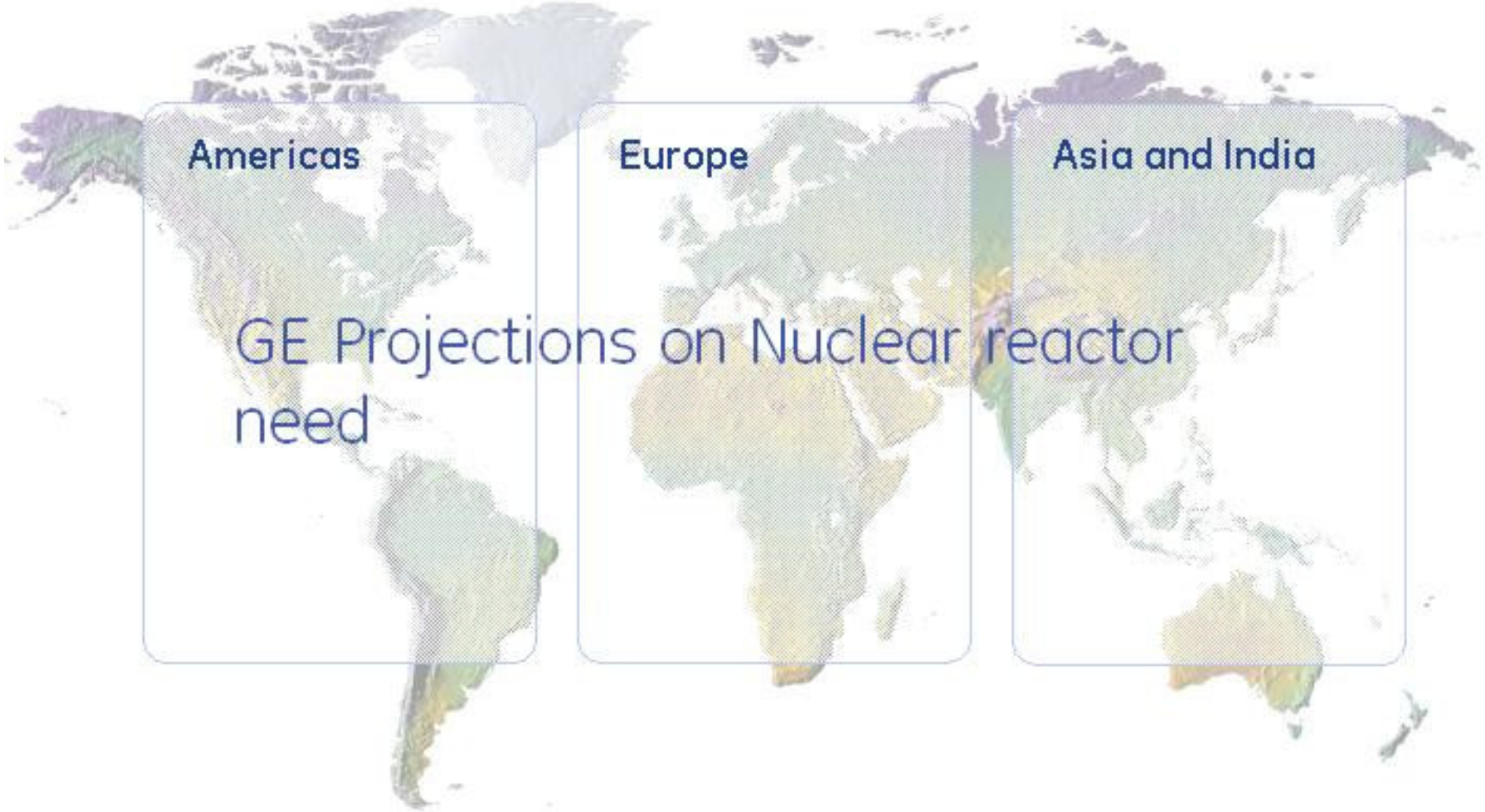
Aggressive global targets

- ✓ 50 countries installing wind power
- ✓ 38 countries with renewable targets
- ✓ 23 US states with RPS goals
- ✓ US … 20% Wind '30
- ✓ EU … 22% Renewables '10
- ✓ China … 30 GW Wind '20
- ✓ India … 12 GW Wind '12

World requiring renewable energy solutions

Future outlook

New Nuclear Construction Forecasts ... (GW Cumulative)



GE Projections on Nuclear reactor need

imagination at work

Source: GE [Nuclear] Projected Forecast

A Changing Energy Environment...

Global Demand for Clean Energy in US, India, UK...US CAP & CO_2 policies

Escalating and Volatile Fuel Costs driving need for new solutions and technology

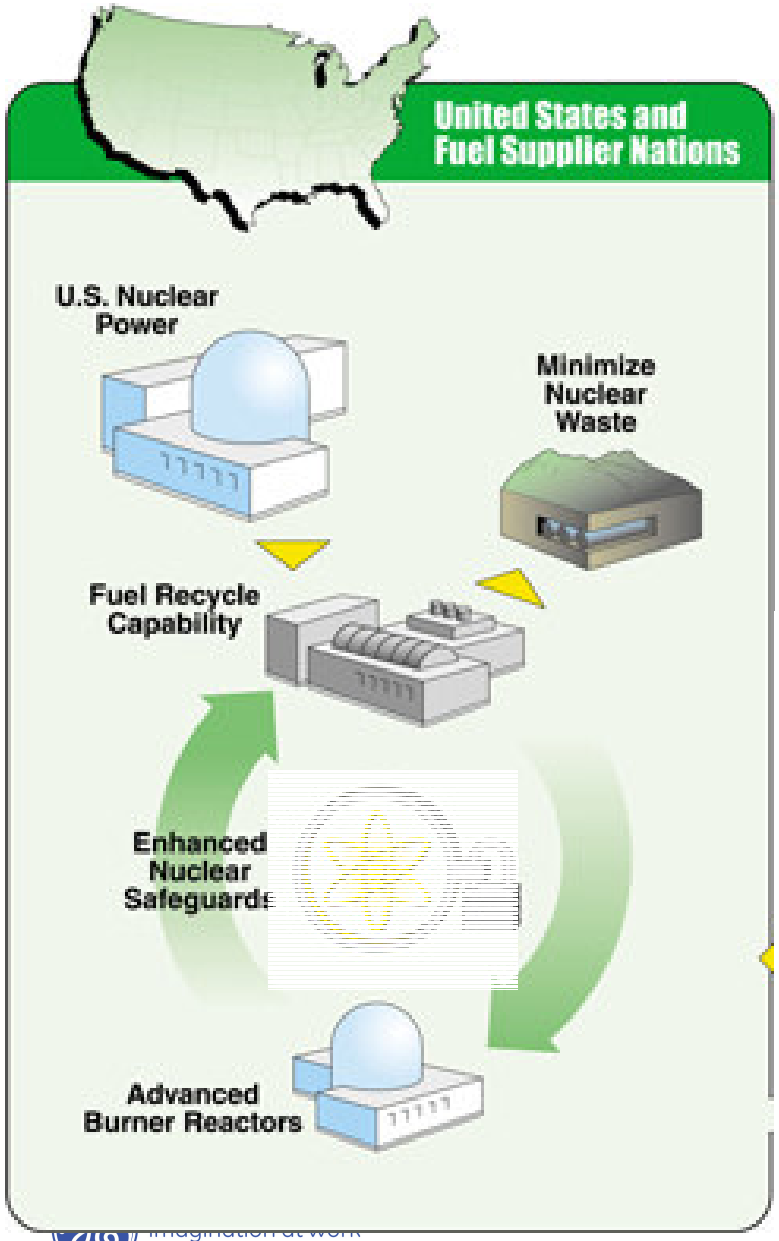
Improved Operating Performance of existing nuclear units remains a priority

Nuclear Waste Solutions...finding a long term solution is critical

U.S. Department of Energy's Global Nuclear Energy Partnership (GNEP):

Developing Long-Term Nuclear Waste Solutions

The Global Nuclear Energy Partnership



GNEP is a comprehensive strategy to:

1. Reduce nuclear proliferation risk
2. Encourage expansion of domestic and international nuclear energy production
3. Reduce the volume, thermal output, and radiological hazard of SNF before disposal in a geologic repository.

Two possible approaches:

1. Open cycle – no recycling (Current approach)
2. Closed cycle – recycling (GNEP proposal)

GE and DOE Roles and Goals

GE

Owns Morris Facility, designed the PRISM "Fast Reactor" and believes:

- Closing the fuel cycle will/must occur
- Available technologies exist to reprocess SNF with the following benefits:
  - Reducing proliferation risk, plutonium is destroyed
  - Limiting environmental impact because of emissions free generation of nuclear power

DOE

Owns the U.S. SNF and has a national interest in closing the fuel cycle loop. DOE must choose:

- Technology
- Site
- Companies to implement

GE's
Morris, Illinois Site

GE's Morris Site

Advantages for Deployment…

- Existing NRC license
- Existing infrastructure-pool, canyon
- Existing LWR SNF bundles
- Transportation issues eliminated for demonstration facility
- Located near an area with increasing demand for power
- State of IL has tremendous human resources:
  - -University of Illinois
  - -Argonne National Lab,
  - -Fermi Laboratory
  - -Operating Nuclear Plants
- Provides an environmentally sound site to support an advanced recycling center and advanced reactor

DOE's 16 Questions

1. Maps
2. Aquatic and riparian ecological communities
3. Water resources (use conflicts or quality degradation)
4. Critical and important terrestrial (plant and animal) habitats
5. Threatened or endangered and special concern species
6. Regional demography within 80 km (50 mi) of site
7. Historical, archaeological, and cultural resources
8. Future projects that may contribute to the cumulative environmental impacts
9. Geology/Seismology
10. Weather/Climatology
11. Hydrology/Flooding
12. Regulatory and permitting
13. Construction costs
14. Storage capability
15. Potential hazardous facilities and activities within 5 mi
16. Site on National Priorities List or in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) database?

3. Water Resources – Surface Water

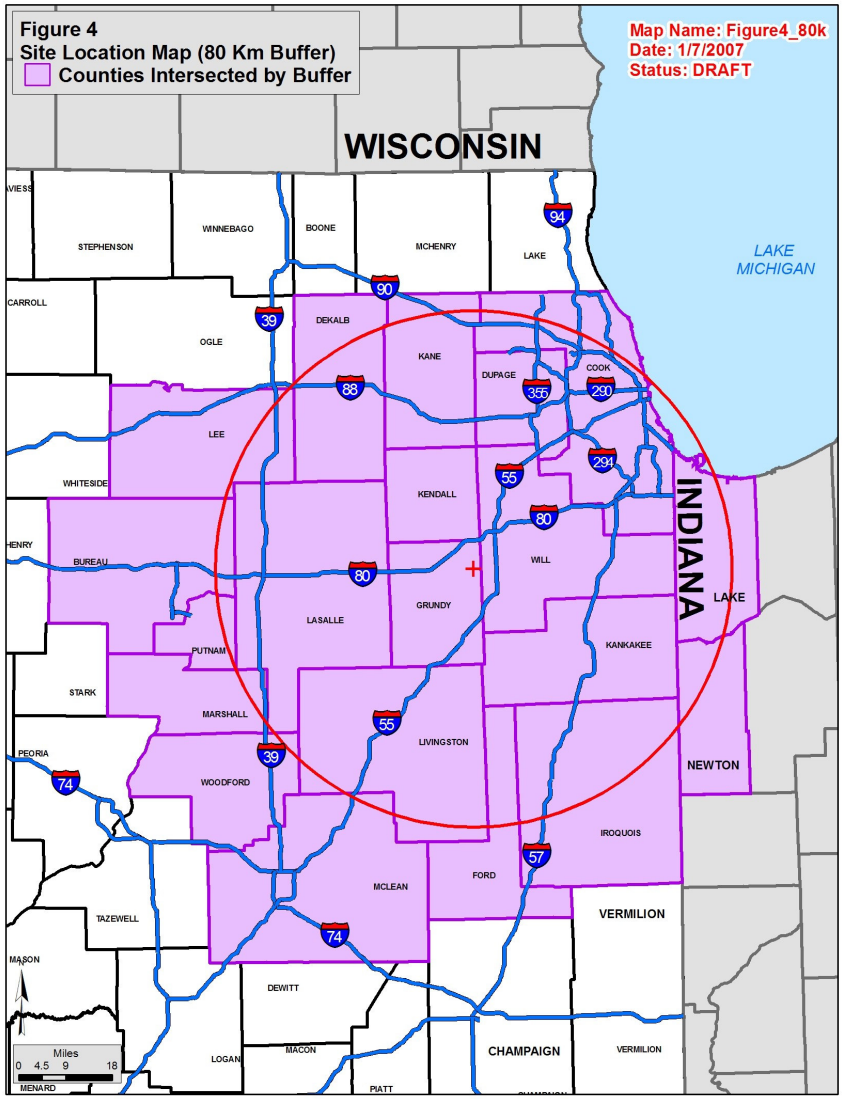
There are two reasonable potential access corridors for surface water

4. Critical and Important Terrestrial Habitats

Potential wetlands Identified on GE Morris facility should not present significant restriction on proposed construction

6. Regional Demography

Outskirts of a growing area with increasing demand for power



Reviewed:

- Local economic base
- Population density
- Housing Markets
- Local Educational Systems
- Tax Structure & Distribution
- Zoning & Land Use

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Reviewed:

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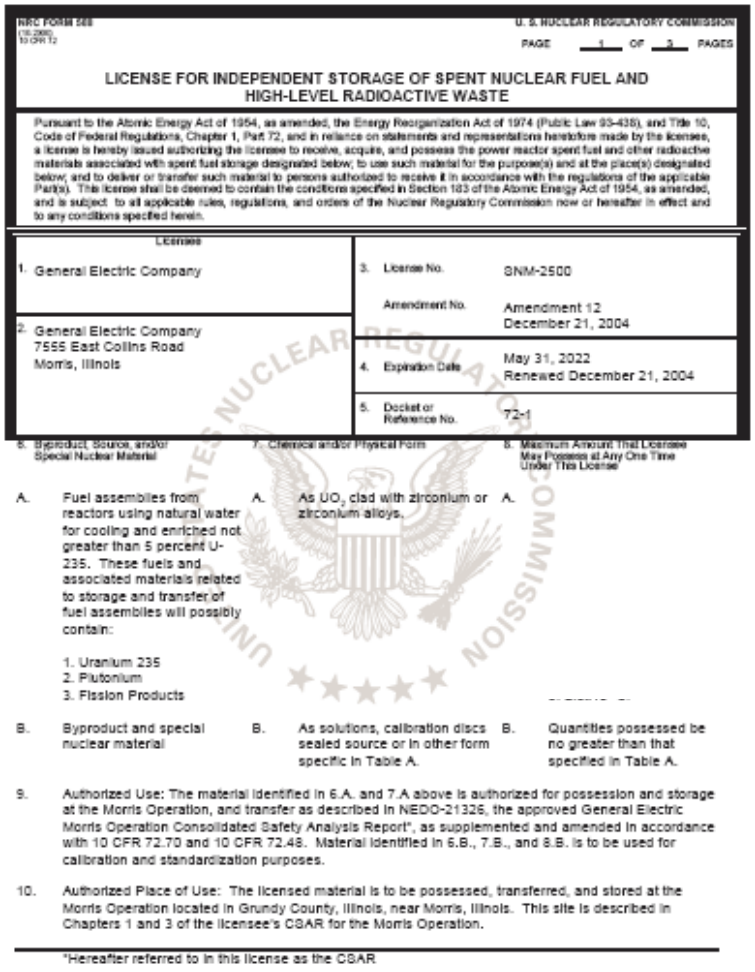
14. Storage capability

Our proposal does not include increasing storage capacity (Morris Facility will continue at its current license limit). In addition, the site is effectively full at this time.



NRC FORM 588 (10-2000) 10 CFR 72

U. S. NUCLEAR REGULATORY COMMISSION

PAGE 1 OF 3 PAGES

LICENSE FOR INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter 1, Part 72, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, and possess the power reactor spent fuel and other radioactive materials associated with spent fuel storage designated below; to use such material for the purpose(s) and at the place(s) designated below; and to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified herein.

Licensee		
1. General Electric Company	3. License No.	SNM-2500
	Amendment No.	Amendment 12 December 21, 2004
2. General Electric Company 7555 East Collins Road Morris, Illinois	4. Expiration Date	May 31, 2022 Renewed December 21, 2004
	5. Docket or Reference No.	72-1

6. Byproduct, Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum Amount That Licensee May Possess at Any One Time Under This License
A. Fuel assemblies from reactors using natural water for cooling and enriched not greater than 5 percent U-235. These fuels and associated materials related to storage and transfer of fuel assemblies will possibly contain: 1. Uranium 235 2. Plutonium 3. Fission Products	A. As UO_2 clad with zirconium or zirconium alloys.	A.
B. Byproduct and special nuclear material	B. As solutions, calibration discs sealed source or in other form specific in Table A.	B. Quantities possessed be no greater than that specified in Table A.

9. Authorized Use: The material identified in 6.A. and 7.A above is authorized for possession and storage at the Morris Operation, and transfer as described in NEDO-21326, the approved General Electric Morris Operation Consolidated Safety Analysis Report*, as supplemented and amended in accordance with 10 CFR 72.70 and 10 CFR 72.48. Material identified in 6.B., 7.B., and 8.B. is to be used for calibration and standardization purposes.

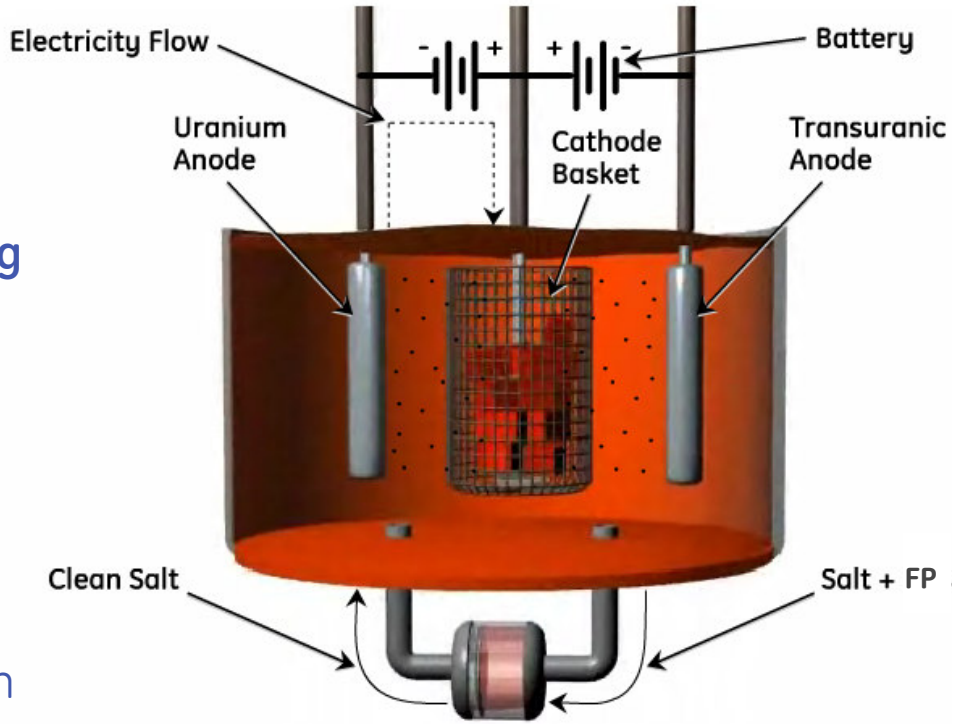
10. Authorized Place of Use: The licensed material is to be possessed, transferred, and stored at the Morris Operation located in Grundy County, Illinois, near Morris, Illinois. This site is described in Chapters 1 and 3 of the licensee's CSAR for the Morris Operation.

*Hereafter referred to in this license as the CSAR

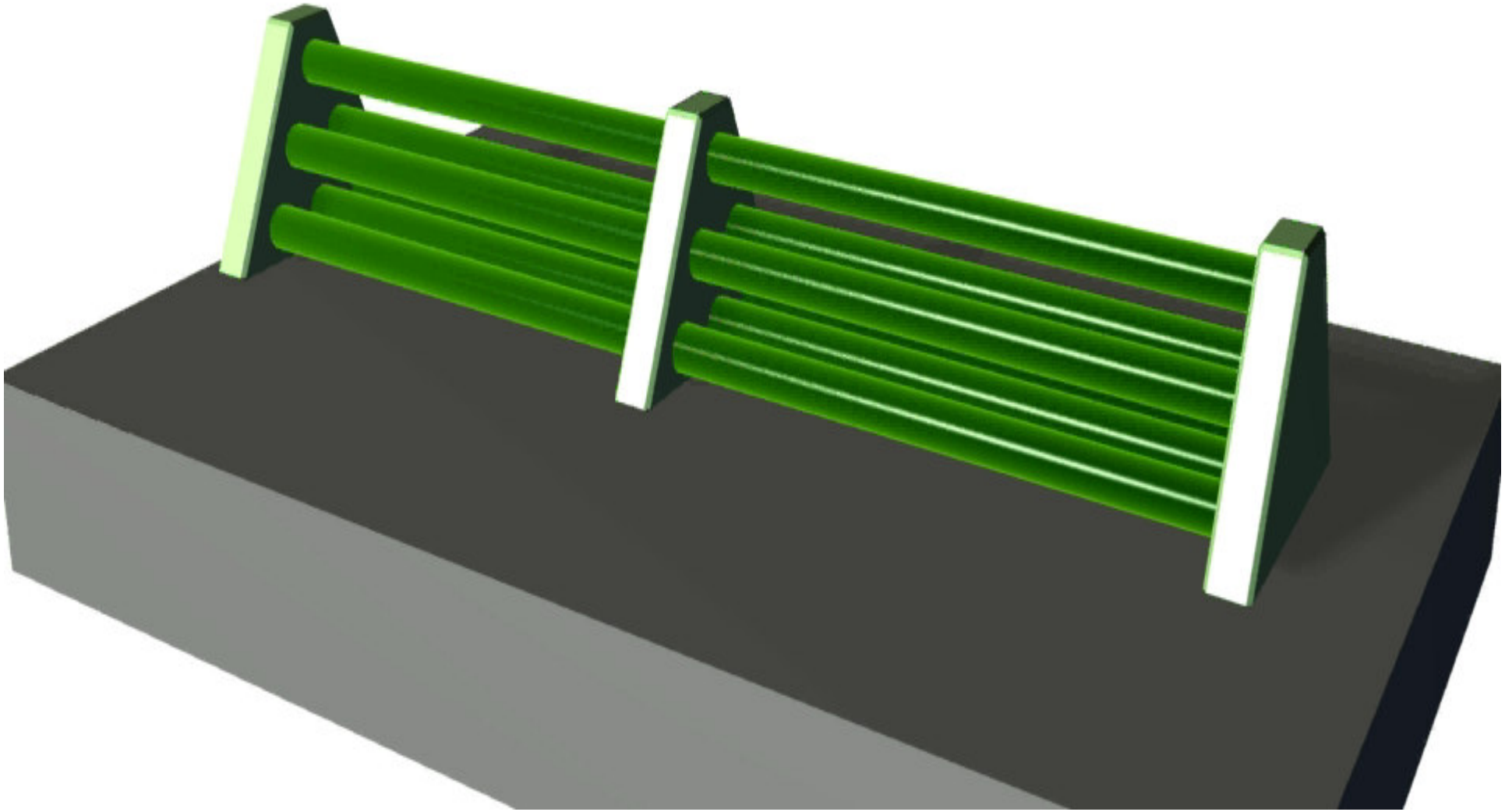
GE's Technology

Nuclear Fuel Recycling Center …

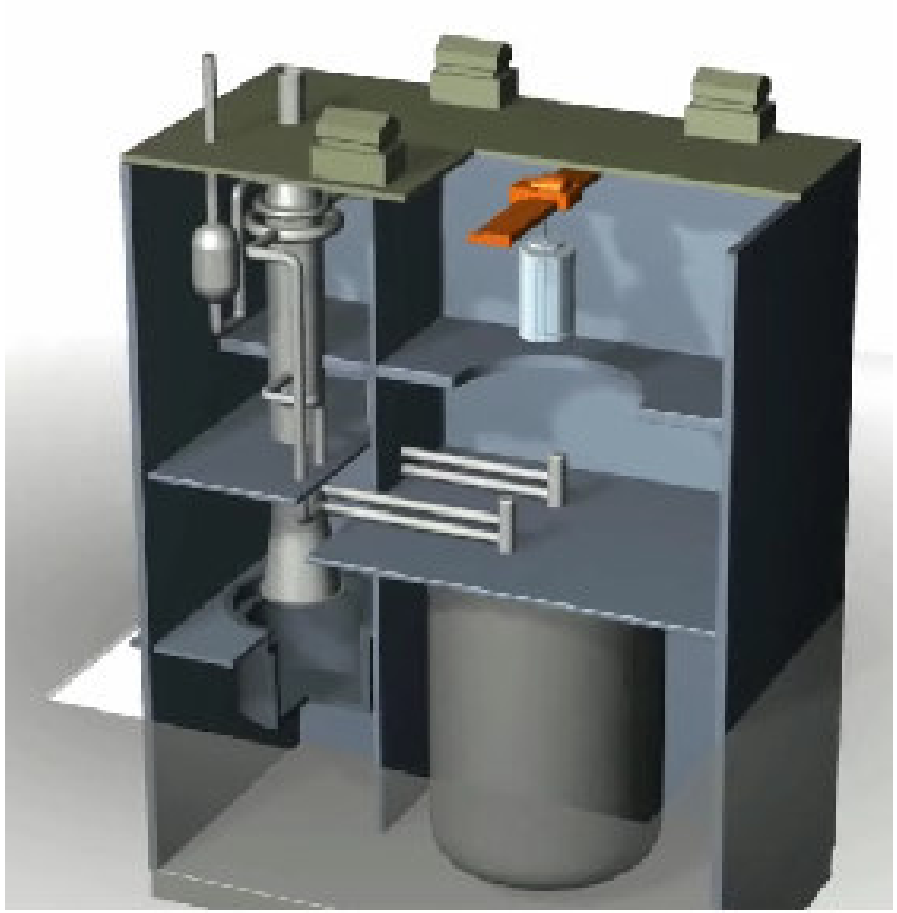
- ✓ **Based on electro-refining technology developed by Argonne National Laboratory** – proliferation resistant
- ✓ **Produces 3 products: Uranium, TRU and FP**
- ✓ **Fabricates fuel for the Advanced Recycling Reactor**
- ✓ **Design features include:**
  - **No Liquid Waste** – avoids negative environmental impact
  - **Modular/Scalable** – rapid construction
  - **Factory Built** - high-quality construction
- ✓ **Extensive component testing**
- ✓ **Used by Metals processing industries for over a century**



Animation that shows pyro-process

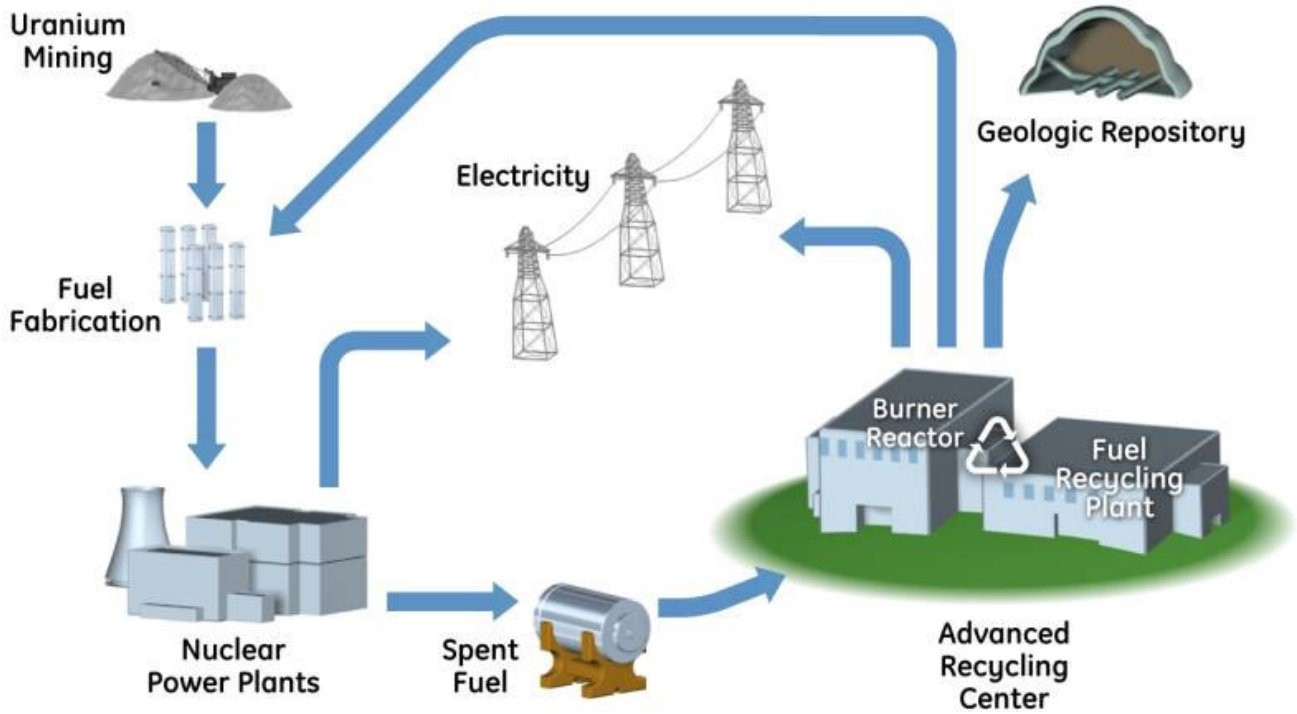


Advanced Recycling Reactor …



- ✓ **Based on GE's PRISM technology** – 50+ years of GE experience
- ✓ **Converts long-lived TRU into short-lived elements**
- ✓ **311 MWe Output**
- ✓ **Design Features Include:**
  - **Passive Safety** – reactor safety w/out operator action
  - **Module/Scalable** – rapid construction
  - **Factory Built** – high quality construction
- ✓ **Ready for Commercial Development**
- ✓ **Low cost & economically competitive w/ Advanced Light Water Reactors**
- ✓ **Extensive component testing**

GE's Vision: Closing the Nuclear Fuel Cycle



Advanced Recycling Center (ARC)

Electro-refining…

- Ideal for fast reactors and metal fuel
- Removes all actinides together
- Process LWR SNF using proven tech
- Low environmental impact

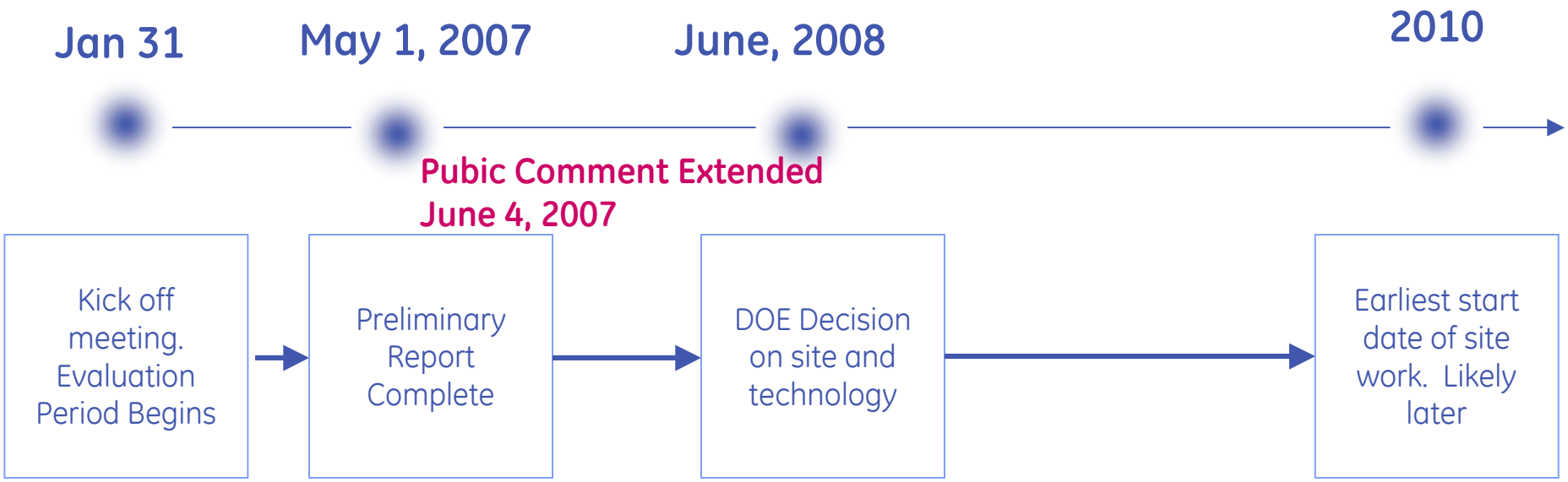
PRISM…

- Simple Operation
- Highly Reliable and Passively Safe
- Simplified O&M
- Modular/Scalable Deployment

Where Do We Go From Here?

Where we are...

DOE's schedule



Site Characterization Report Complete

Benefits for Illinois

More to gain than any other state…

If technology works…

- ✓~400 Permanent Jobs
- ✓1,000's of Construction jobs during build
- ✓Between $1 - $2B in Capital Investment
- ✓ Decommissioning will be funded through electricity revenue

If technology isn't viable…

- ✓ Technology won't be expanded to other locations
- ✓ Construction Jobs, Investment are sunk costs

No need to transport fuel…

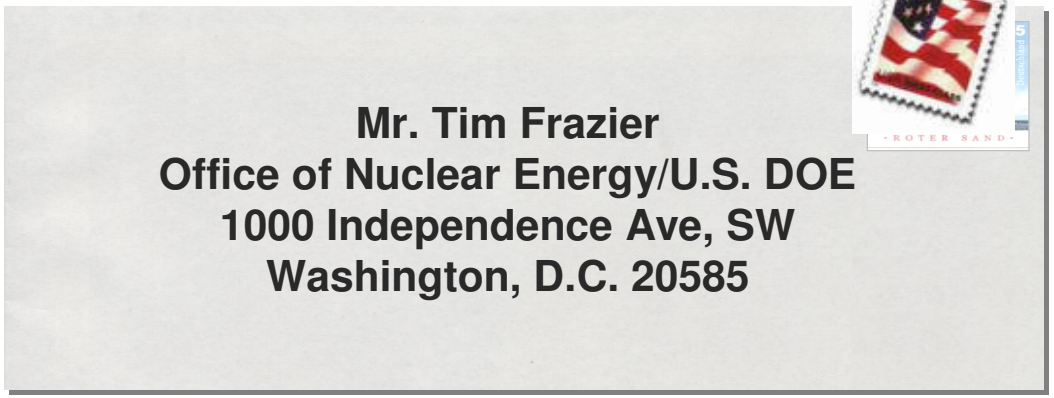
- ✓ Enough fuel on site for initial testing ~10 yrs operation
- ✓ Fuel available without moving over public roads

How to Provide Your Comments

At scoping meeting

> Oral and written

By U.S. mail ➔



By e-mail: GNEP-PEIS@nuclear.energy.gov

By telephone: Toll free 866-645-7803

By fax: Toll free 866-645-7807

For more information visit: www.gnep.energy.gov

Thank you
for attending!

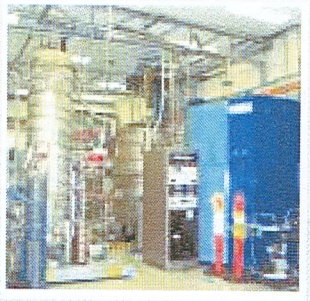
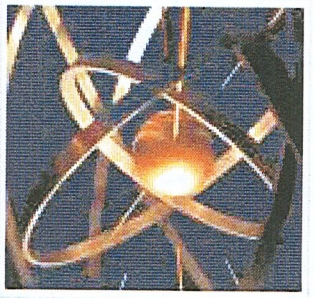
Questions…

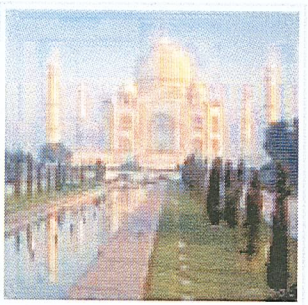
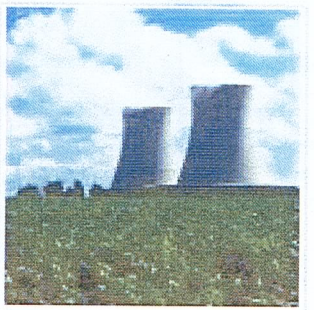
Attachment 3

Morris Meeting

April 25, 2007

GE
Energy

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April 25, 2007
Morris, Illinois

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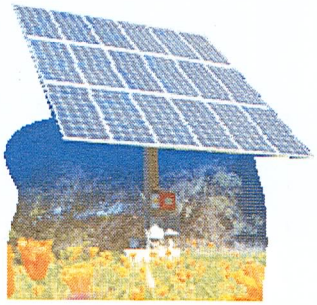


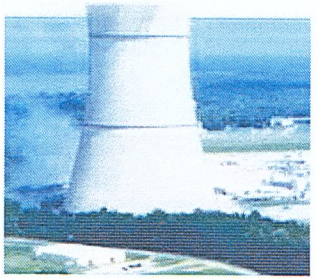
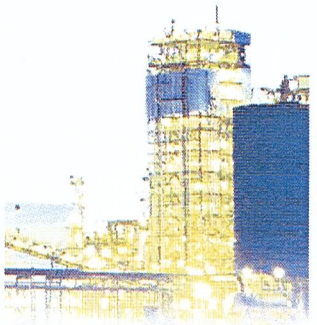
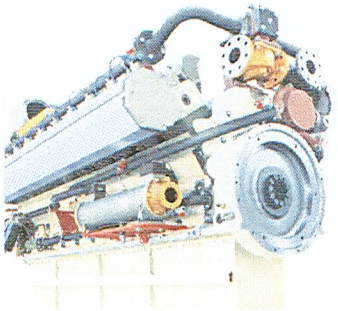

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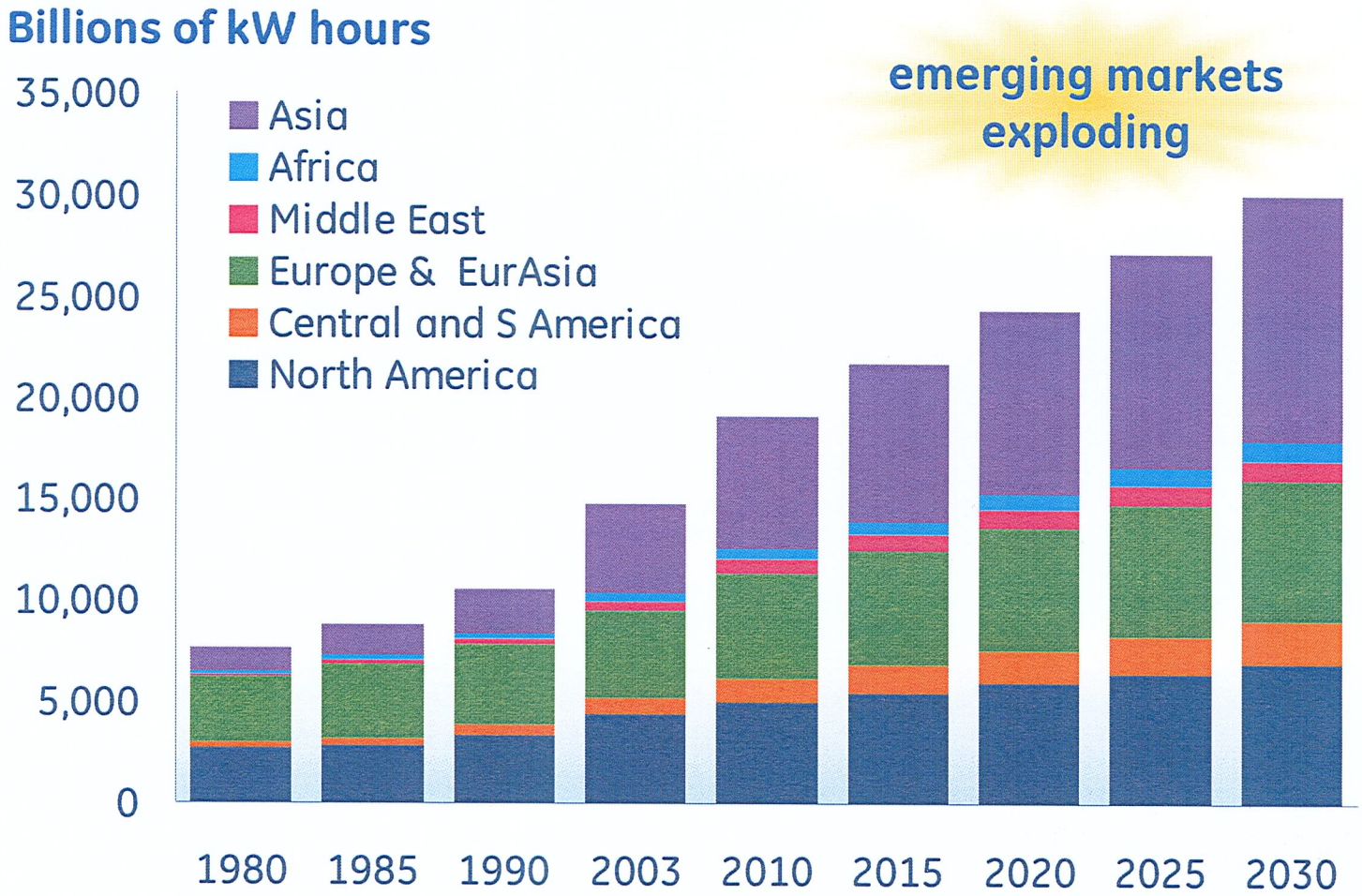

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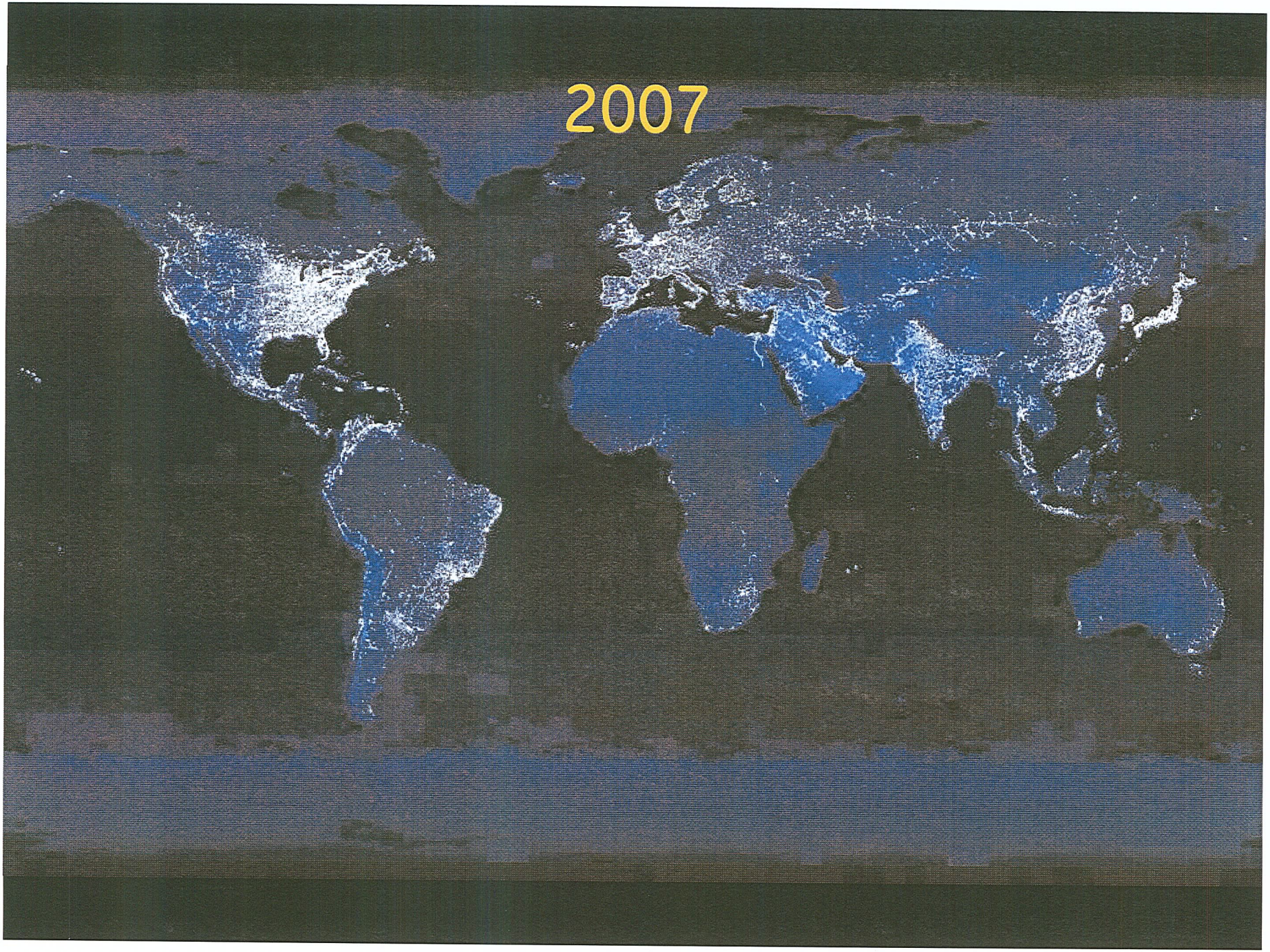
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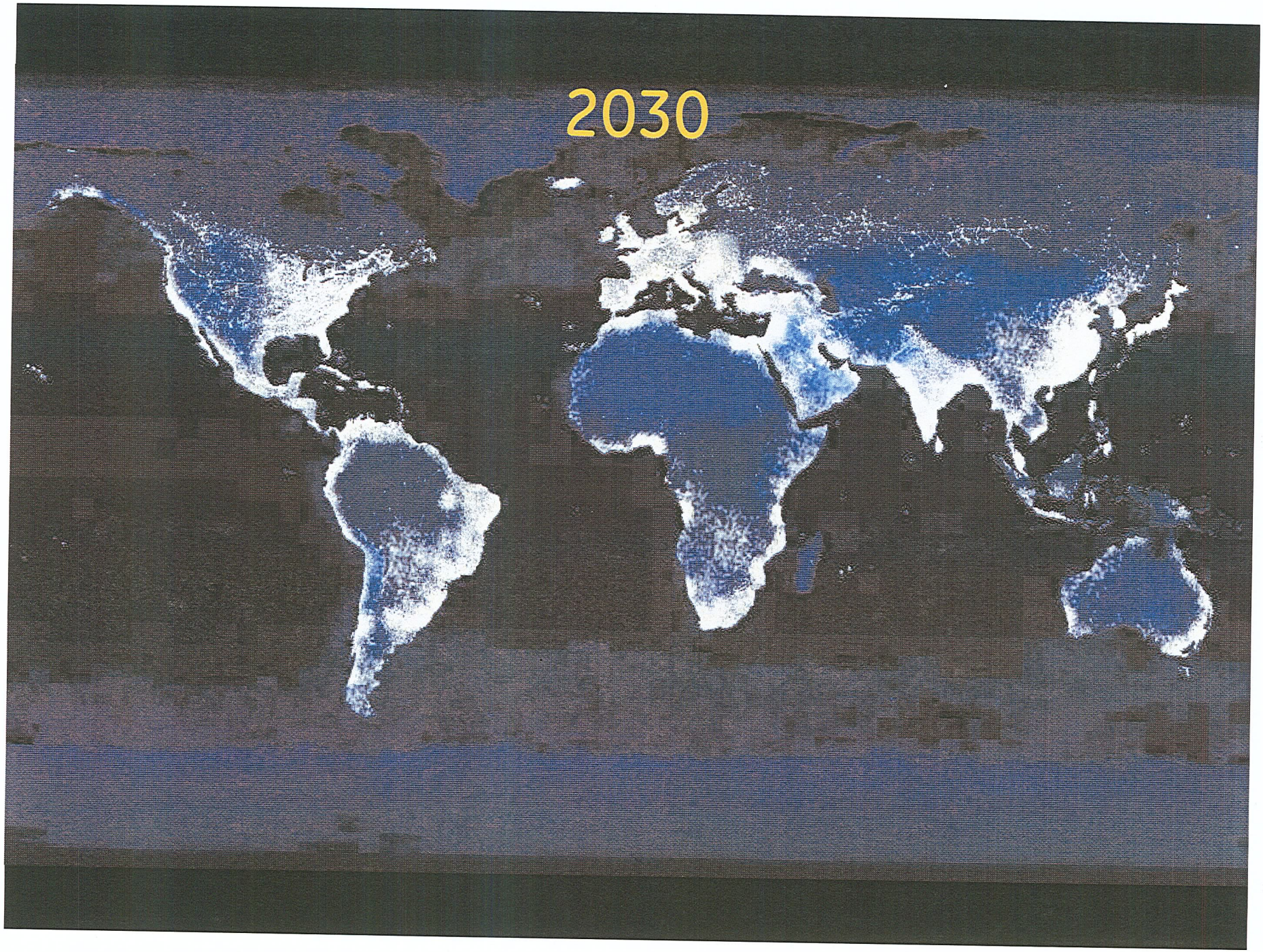
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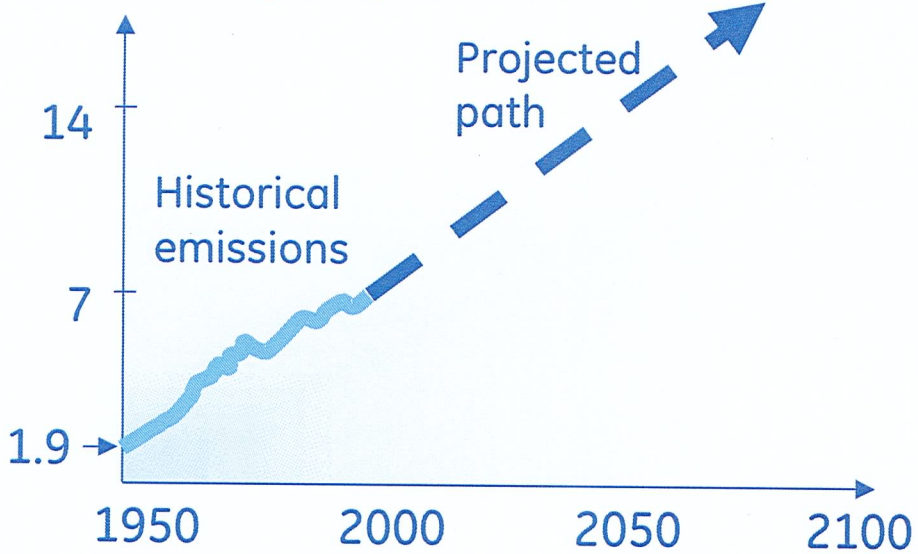

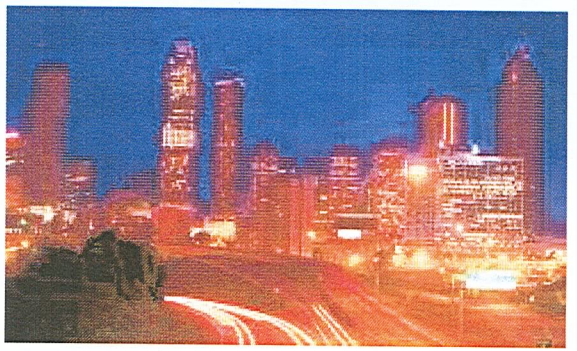

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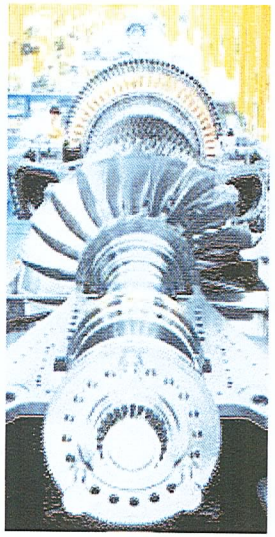

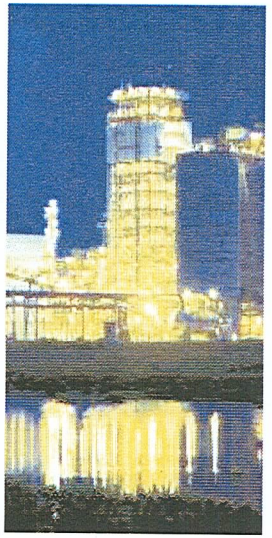

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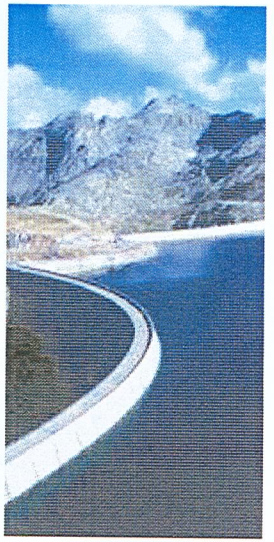

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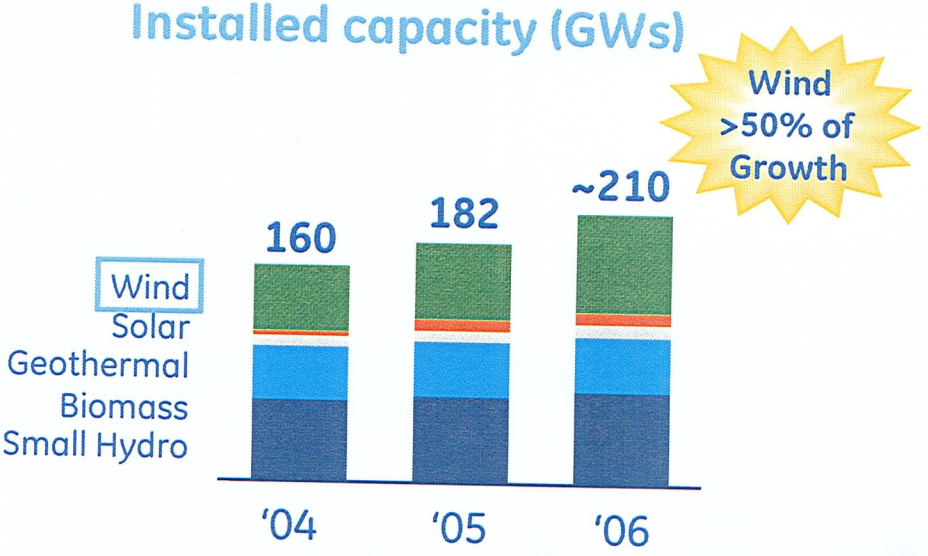

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World requiring renewable energy solutions

Future outlook

New Nuclear Construction Forecasts ... (GW Cumulative)

Americas	Europe	Asia and India

GE Projection on new nuclear plants

imagination at work

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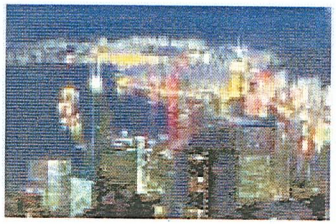
A Changing Energy Environment...



Global Demand for Clean Energy in US, India, UK...US CAP & CO_2 policies

Escalating and Volatile Fuel Costs driving need for new solutions and technology

Improved Operating Performance of existing nuclear units remains a priority

Nuclear Waste Solutions...finding a long term solution is critical

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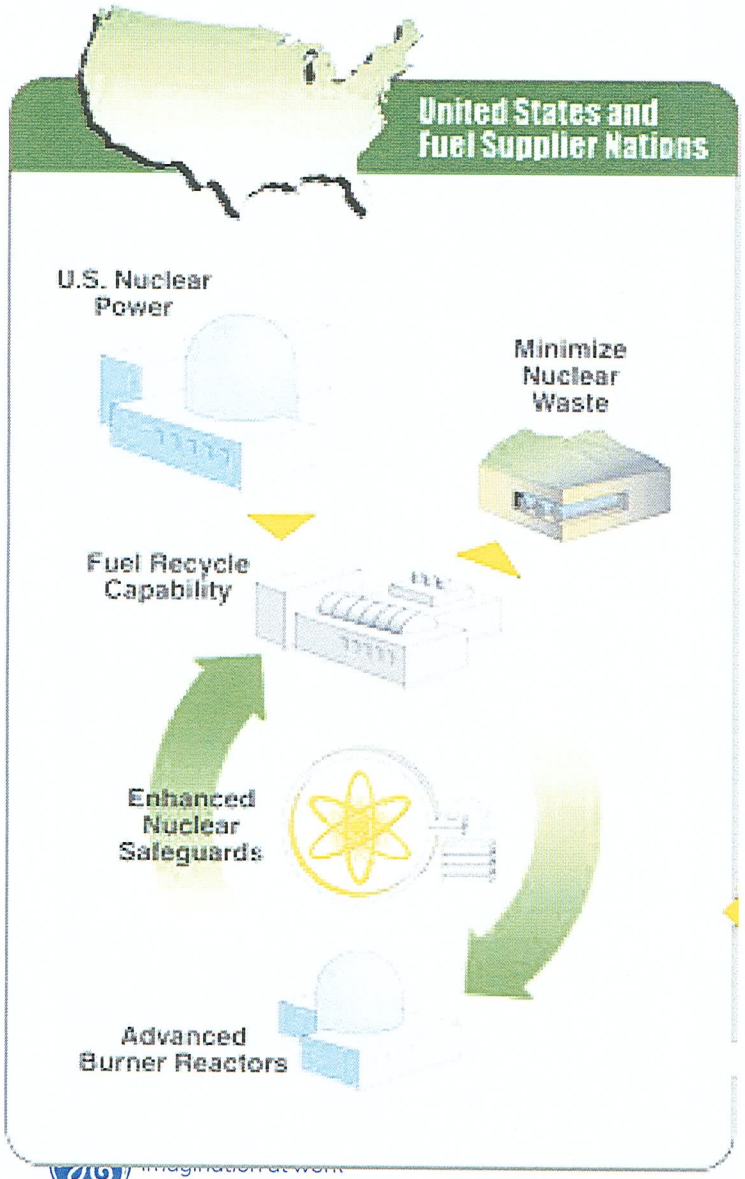


GNEP is a comprehensive strategy to:

1. Reduce nuclear proliferation risk
2. Encourage expansion of domestic and international nuclear energy production
3. Reduce the volume, thermal output, and radiological hazard of SNF before disposal in a geologic repository.

Two possible approaches:

1. Open cycle – no recycling (Current approach)
2. Closed cycle – recycling (GNEP proposal)

GE and DOE Roles and Goals

GE

Owns Morris Facility, designed the PRISM "Fast Reactor" and believes:

- Closing the fuel cycle will/must occur
- Available technologies exist to reprocess SNF with the following benefits:
  - Reducing proliferation risk, plutonium is destroyed
  - Limiting environmental impact because of emissions free generation of nuclear power

DOE

Owns the U.S. SNF and has a national interest in closing the fuel cycle loop. DOE must choose:

- Technology
- Site
- Companies to implement

GE's
Morris, Illinois Site

GE's Morris Site

Advantages for Deployment...

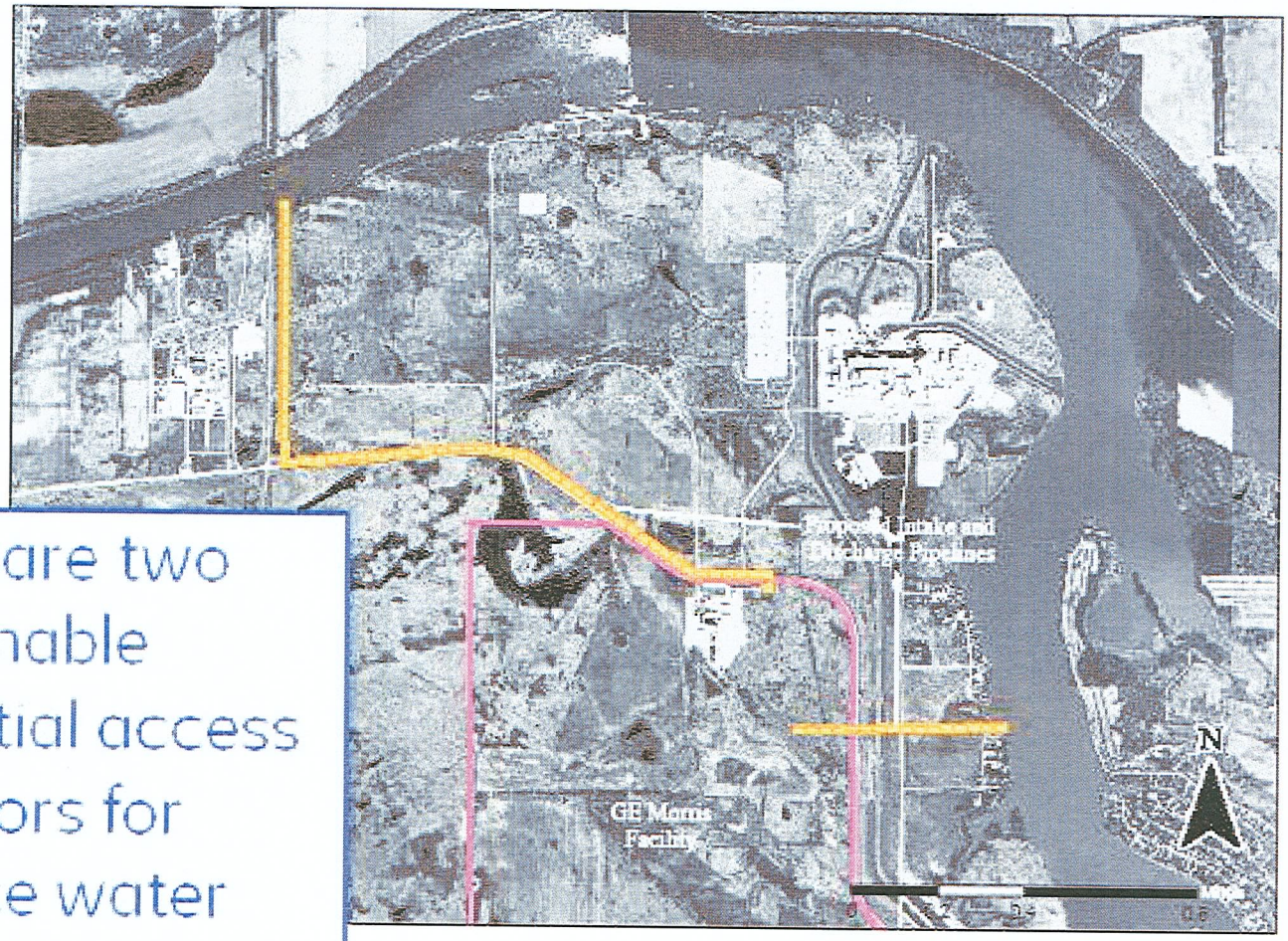
- Existing NRC license
- Existing infrastructure-pool, canyon
- Existing LWR SNF bundles
- Transportation issues eliminated for demonstration facility
- Located near an area with increasing demand for power
- State of IL has tremendous human resources:
  - -University of Illinois
  - -Argonne National Lab,
  - -Fermi Laboratory
  - -Operating Nuclear Plants
- Provides an environmentally sound site to support an advanced recycling center and advanced reactor

DOE's 16 Questions

1. Maps
2. Aquatic and riparian ecological communities
3. Water resources (use conflicts or quality degradation)
4. Critical and important terrestrial (plant and animal) habitats
5. Threatened or endangered and special concern species
6. Regional demography within 80 km (50 mi) of site
7. Historical, archaeological, and cultural resources
8. Future projects that may contribute to the cumulative environmental impacts
9. Geology/Seismology
10. Weather/Climatology
11. Hydrology/Flooding
12. Regulatory and permitting
13. Construction costs
14. Storage capability
15. Potential hazardous facilities and activities within 5 mi
16. Site on National Priorities List or in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) database?

RTI INTERNATIONAL

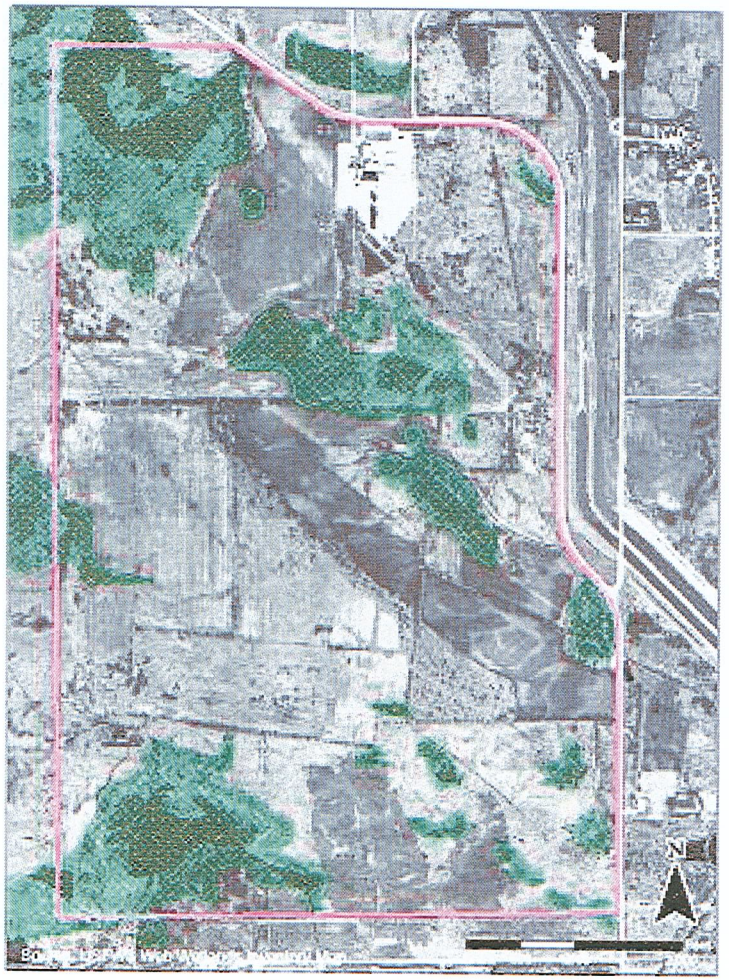
3. Water Resources – Surface Water



There are two reasonable potential access corridors for surface water

4 Critical and Important Terrestrial Habitats

Potential wetlands Identified on GE Morris facility should not present significant restriction on proposed construction



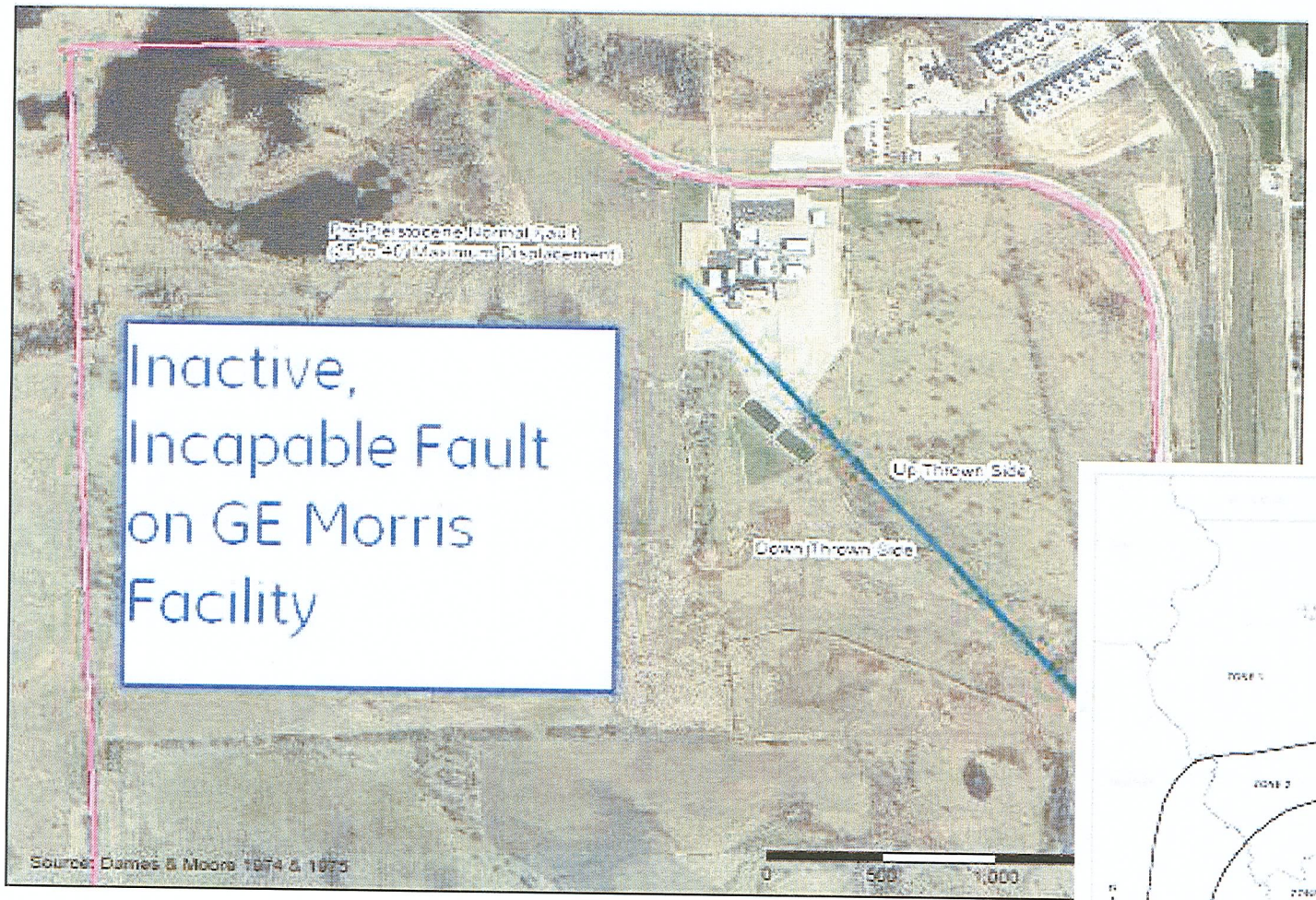
6. Regional Demography

Outskirts of a growing area with increasing demand for power

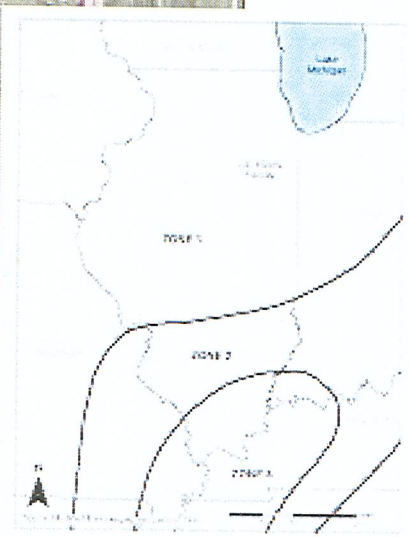
Reviewed:

- Local economic base
- Population density
- Housing Markets
- Local Educational Systems
- Tax Structure & Distribution
- Zoning & Land Use

9. Geology/Seismology

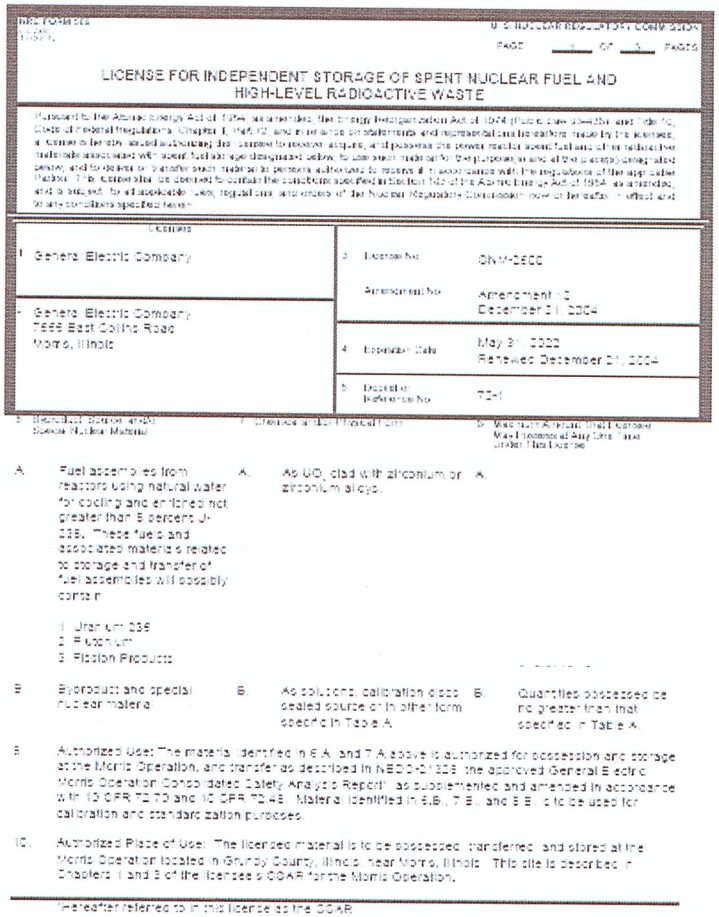


Inactive, Incapable Fault on GE Morris Facility



14. Storage capability

Our proposal does not include increasing storage capacity (Morris Facility will continue at its current license limit). In addition, the site is effectively full at this time.



LICENSE FOR INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Part 72, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, and possess the power reactor spent fuel and other radioactive materials associated with spent fuel storage designated below; to use such material for the purposes and at the places designated below; and to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the appropriate Parties. This license also authorizes the conduct of activities under Section 102 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to the conditions specified herein.

Licensee

1 General Electric Company

2 General Electric Company
7555 East Collins Road
Morris, Illinois

3 License No. GNM-2600
Amendment No. Amendment 12
December 21, 2004

4 Expiration Date May 31, 2020
Renewed December 21, 2004

5 Docket or Reference No. 72-1

6 Byproduct, Source and/or Special Nuclear Material

7 Chemical and/or Physical Form

8 Maximum Amount That Licensee May Have Possession at Any One Time Under This License

A. Fuel assemblies from reactors using natural water for cooling and enriched not greater than 5 percent U-235. These fuels and associated materials related to storage and transfer of fuel assemblies will possibly contain:

1. Uranium-238
2. Plutonium
3. Fission Products

A. As UO2 clad with zirconium or zirconium alloys.

A.

B. Byproduct and special nuclear material

B. As solutions, calibration discs, sealed source or in other form specified in Table A.

B. Quantities possessed be no greater than that specified in Table A.

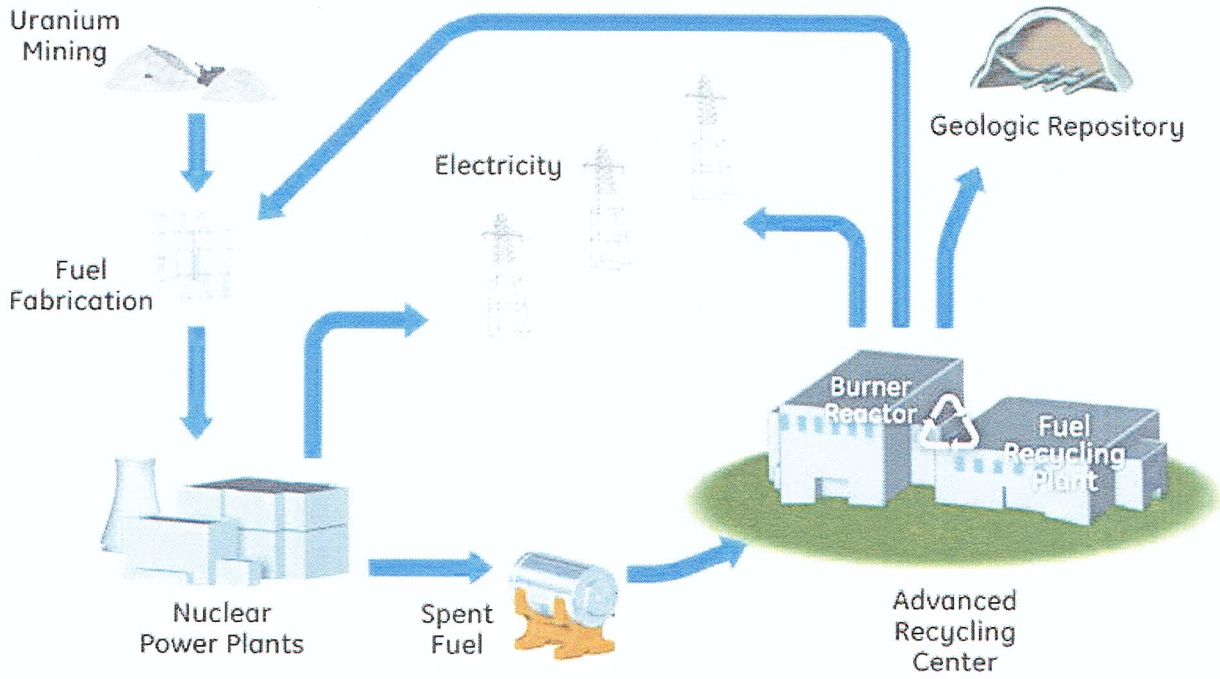
9. Authorized Use: The materials identified in 6.A. and 7.A above is authorized for possession and storage at the Morris Operation, and transfers as described in NED-01338, the approved General Electric Morris Operation Consolidated Safety Analysis Report, as supplemented and amended in accordance with 10 CFR 72.70 and 10 CFR 72.48. Material identified in 6.B., 7.B., and 8.B. is to be used for calibration and standard calibration purposes.

10. Authorized Place of Use: The licensed material is to be possessed, transferred, and stored at the Morris Operation located in Grundy County, Illinois, near Morris, Illinois. This site is described in Chapters 1 and 3 of the licensee's CoSAR for the Morris Operation.

(hereafter referred to in this license as the CoSAR)

GE's Technology

GE's Vision: Closing the Nuclear Fuel Cycle



Advanced Recycling Center (ARC)

Electro-refining…

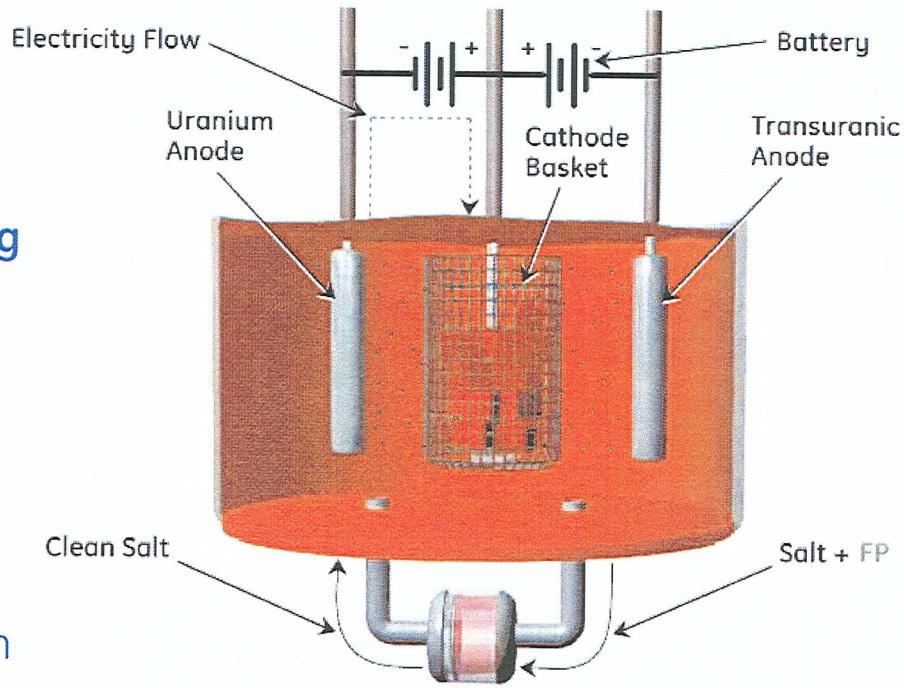
- Ideal for fast reactors and metal fuel
- Removes all actinides together
- Process LWR SNF using proven tech
- Low environmental impact

PRISM…

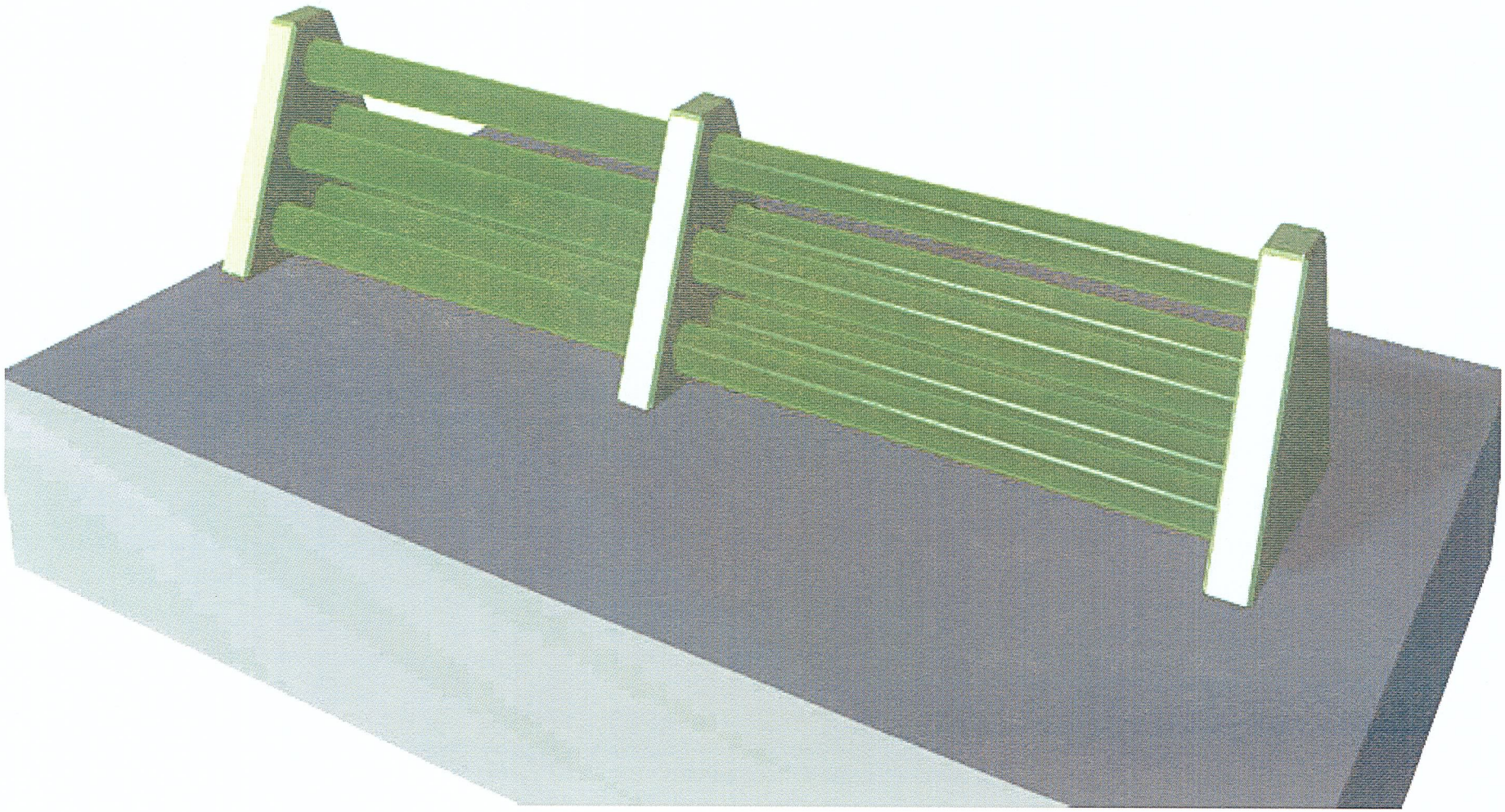
- Simple Operation
- Highly Reliable and Passively Safe
- Simplified O&M
- Modular/Scalable Deployment

Nuclear Fuel Recycling Center …

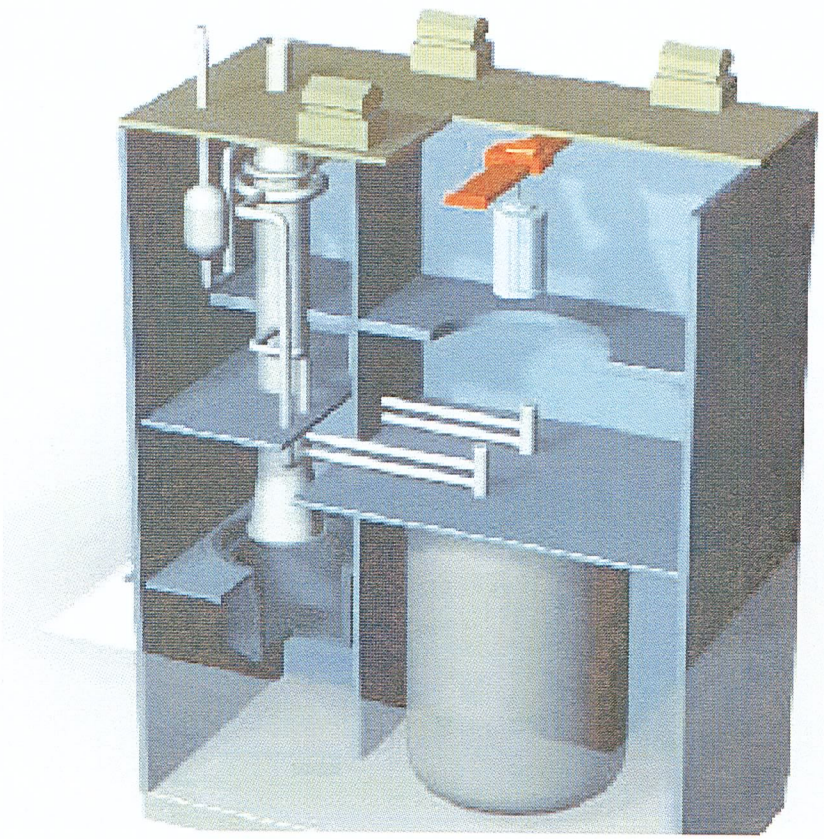
- ✓ **Based on electro-refining technology developed by Argonne National Laboratory** – proliferation resistant
- ✓ **Produces 3 products: Uranium, TRU and FP**
- ✓ **Fabricates fuel for the Advanced Recycling Reactor**
- ✓ **Design features include:**
  - **No Liquid Waste** – avoids negative environmental impact
  - **Modular/Scalable** – rapid construction
  - **Factory Built** - high-quality construction
- ✓ **Extensive component testing**
- ✓ **Used by Metals processing industries for over a century**



Animation of pyro-process



Advanced Recycling Reactor ...

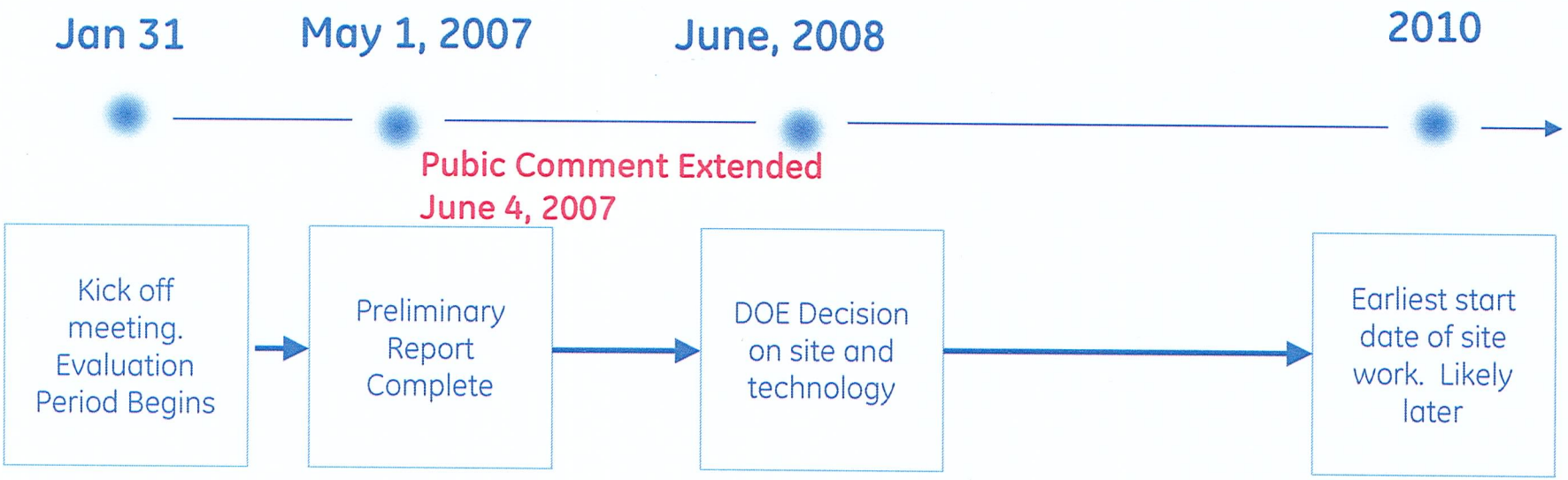


- ✓ **Based on GE's PRISM technology** – 50+ years of GE experience
- ✓ **Converts long-lived TRU into short-lived elements**
- ✓ **311 MWe Output**
- ✓ **Design Features Include:**
  - **Passive Safety** – reactor safety w/out operator action
  - **Module/Scalable** – rapid construction
  - **Factory Built** – high quality construction
- ✓ **Ready for Commercial Development**
- ✓ **Low cost & economically competitive w/ Advanced Light Water Reactors**
- ✓ **Extensive component testing**

Where Do We Go From Here?

Where we are...

DOE's schedule



90 days to complete Site Characterization Report

Benefits for Illinois

More to gain than any other state...

If technology works...

- ✓ ~400 Permanent Jobs
- ✓ 1,000's of Construction jobs during build
- ✓ Between $1 - $2B in Capital Investment
- ✓ Decommissioning will be funded through electricity revenue

If technology isn't viable...

- ✓ Technology won't be expanded to other locations
- ✓ Construction Jobs, Investment are sunk costs

No need to transport fuel...

- ✓ Enough fuel on site for initial testing ~10 yrs operation
- ✓ Fuel available without moving over public roads

How to Provide Your Comments

By U.S. mail →

Mr. Tim Frazier
Office of Nuclear Energy/U.S. DOE
1000 Independence Ave, SW
Washington, D.C. 20585

By e-mail: GNEP-PEIS@nuclear.energy.gov

By telephone: Toll free 866-645-7803

By fax: Toll free 866-645-7807

For more information visit: www.gnep.energy.gov

Thank you
for attending!

Questions...

Attachment 4

Morris Environmental Presentation Handout

April 25, 2007

Siting Grant

$10 million for 11 sites to conduct detailed site study for integrated spent fuel recycling facilities

- Determine the suitability of hosting:
  - An advanced nuclear fuel recycling center and/or
  - An advanced burner reactor

- Conduct a detailed 90 day site characterization study and submit the study to DOE

- Information gathered during 90-day study will be used to prepare programmatic environmental impact statement (PEIS), which will evaluate the potential environmental impact for each proposed GNEP facility

Summary of Environmental Findings

- No environmental obstacles to the placement of the proposed facilities on the site

- Strong candidate for construction of the proposed GNEP facilities

- On schedule to provide report to DOE May 1, 2007

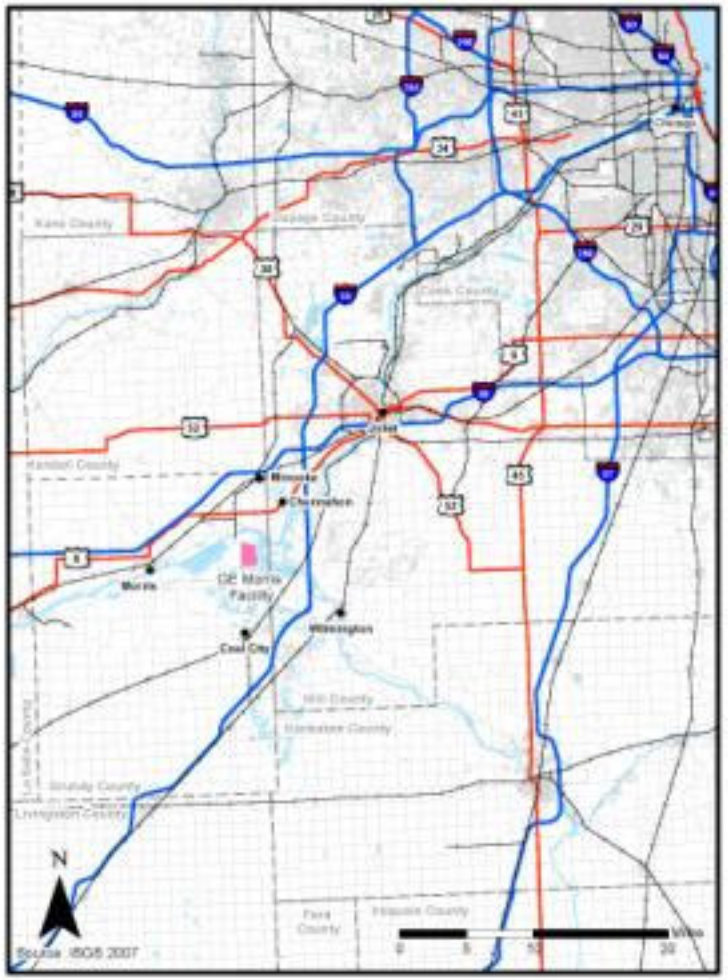
16 Questions From Funding Request

1. Maps
2. Aquatic and riparian ecological communities
3. Water resources (use conflicts or quality degradation)
4. Critical and important terrestrial (plant and animal) habitats
5. Threatened or endangered and special concern species
6. Regional demography within 80 km (50 mi) of site
7. Historical, archaeological, and cultural resources
8. Future projects that may contribute to the cumulative environmental impacts
9. Geology/Seismology
10. Weather/Climatology
11. Hydrology/Flooding
12. Regulatory and permitting
13. Construction costs
14. Storage capability
15. Potential hazardous facilities and activities within 5 mi
16. Site on National Priorities List or in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) database?

1. Maps – Site Parcels and Surrounding Ownership

- GE Morris Site 889 acres
- Mostly undeveloped
- Current operations use 15 acres

1. Maps – Transportation Links



- Abundant transportation corridors
- Extensive rail lines in the area

Regional

Local

imagination at work

2. Aquatic and Riparian Ecology

- Diversity of species in rivers as well as numbers of individuals within various species have been increasing since 1970s

- Historical studies for the Dresden and Braidwood nuclear power plants have shown no detrimental effects to ecology of river as result of operations

- Possible utility corridors for proposed facility are along existing utility corridors, causing minimal impact to riparian habitat

3. Water Resources

- Both surface water and ground water are abundant, and readily available
- There are no significant restrictions to responsible use
- Careful evaluation of project needs will allow use of these resources to be balanced, minimizing potential environmental impacts

3. Water Resources – Surface Water

There are two reasonable potential access corridors for surface water

4. Critical and Important Terrestrial Habitats

- No critical habitats identified on GE Morris facility

4. Critical and Important Terrestrial Habitats

Potential wetlands Identified on GE Morris facility should not present significant restriction on proposed construction

5. Threatened and Endangered Species

- No threatened or endangered species identified on GE Morris facility
- No designated critical habitats on GE Morris facility
- Habitat suitable for two endangered species is present on GE Morris facility

5. Threatened and Endangered Species

- No threatened or endangered species identified on GE Morris facility
- No designated critical habitats on GE Morris facility
- Habitat suitable for:
  - –Eastern Massasauga
  - –Eastern Prarie Fringed Orchid
    - Will require further evaluation in growing season

Eastern Massasauga

(Sistrurus Catenatus)

Eastern Prairie Fringed Orchid (Platanthera leucophaea)

6. Regional Demography

Outskirts of a growing area with increasing demand for power

Reviewed:

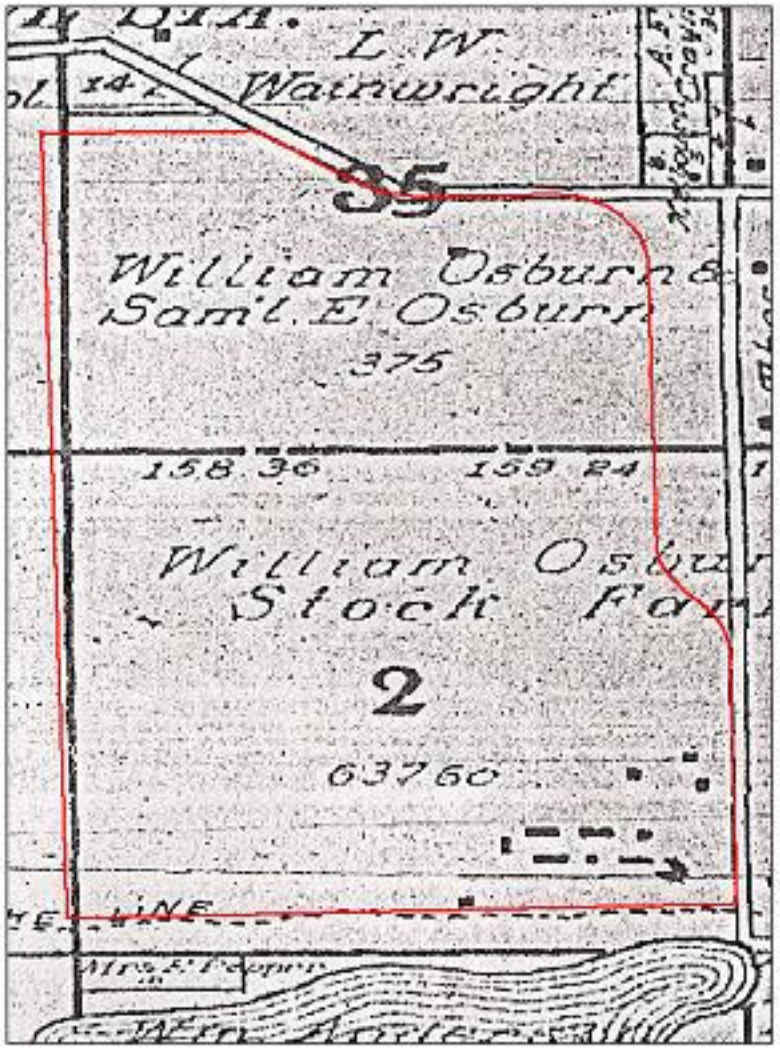
- Local economic base
- Population density
- Housing Markets
- Local Educational Systems
- Tax Structure & Distribution
- Zoning & Land Use

7. Historical/Archaeological/Cultural Resources

- No listed archaeological resources on GE Morris facility (20 identified in 2 mile radius)
- No national register properties on GE Morris facility (5 located in Morris)
- Historic topographic maps show structures in southeastern corner of GE property. May require further evaluation, but not likely to be impacted by proposed facility.

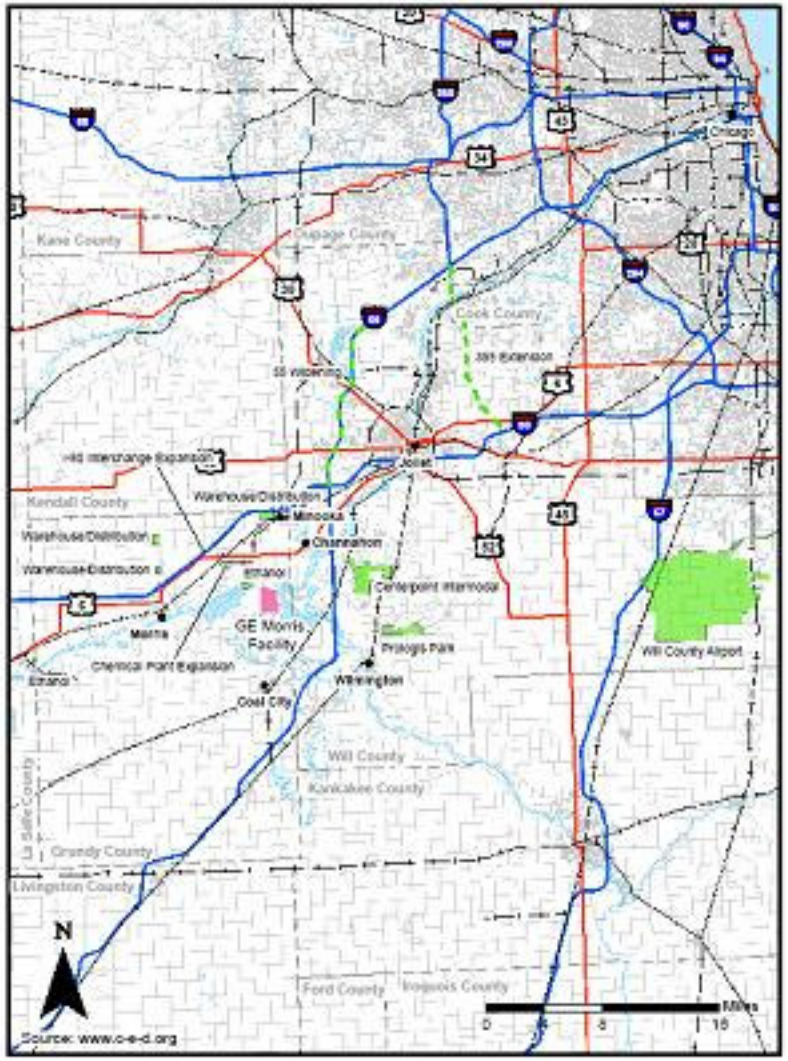
7. Historical/Archaeological/Cultural Resources

Structures shown on southeastern corner of property on 1909 topographic map.



8. Future Projects

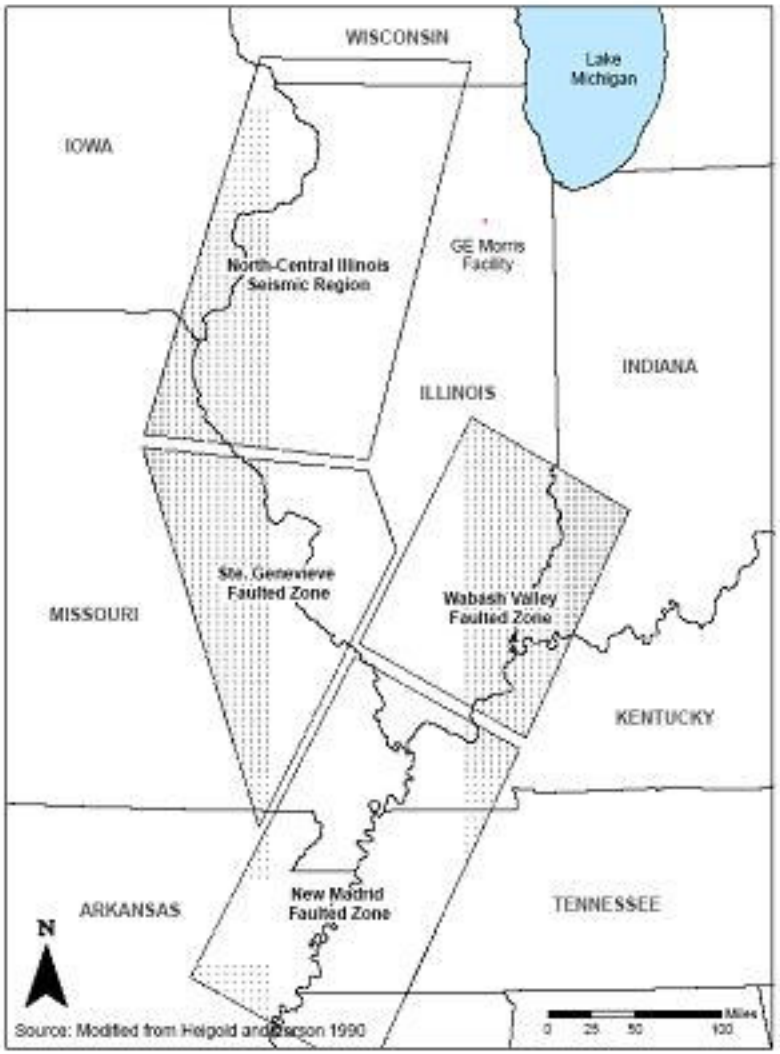
- Key developments in Grundy and Will Counties include:
- Warehousing/distribution
- Will County Airport
- Road expansion/extension
- Ethanol plants



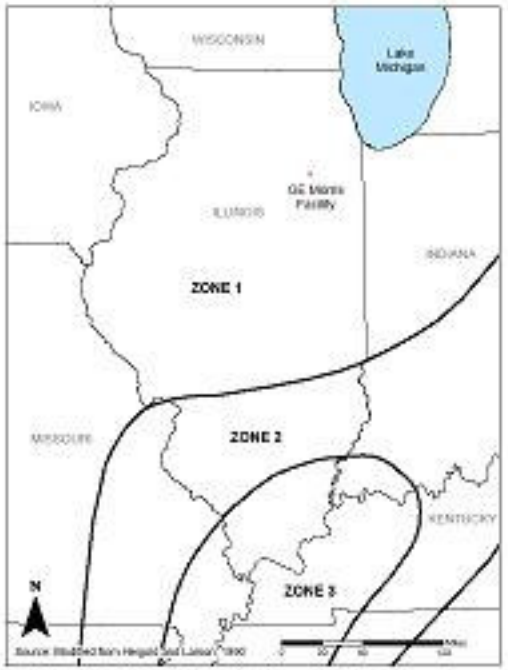
imagination at work

April 26, 2007

9. Geology/Seismology



- GE Morris site in area of low seismic risk



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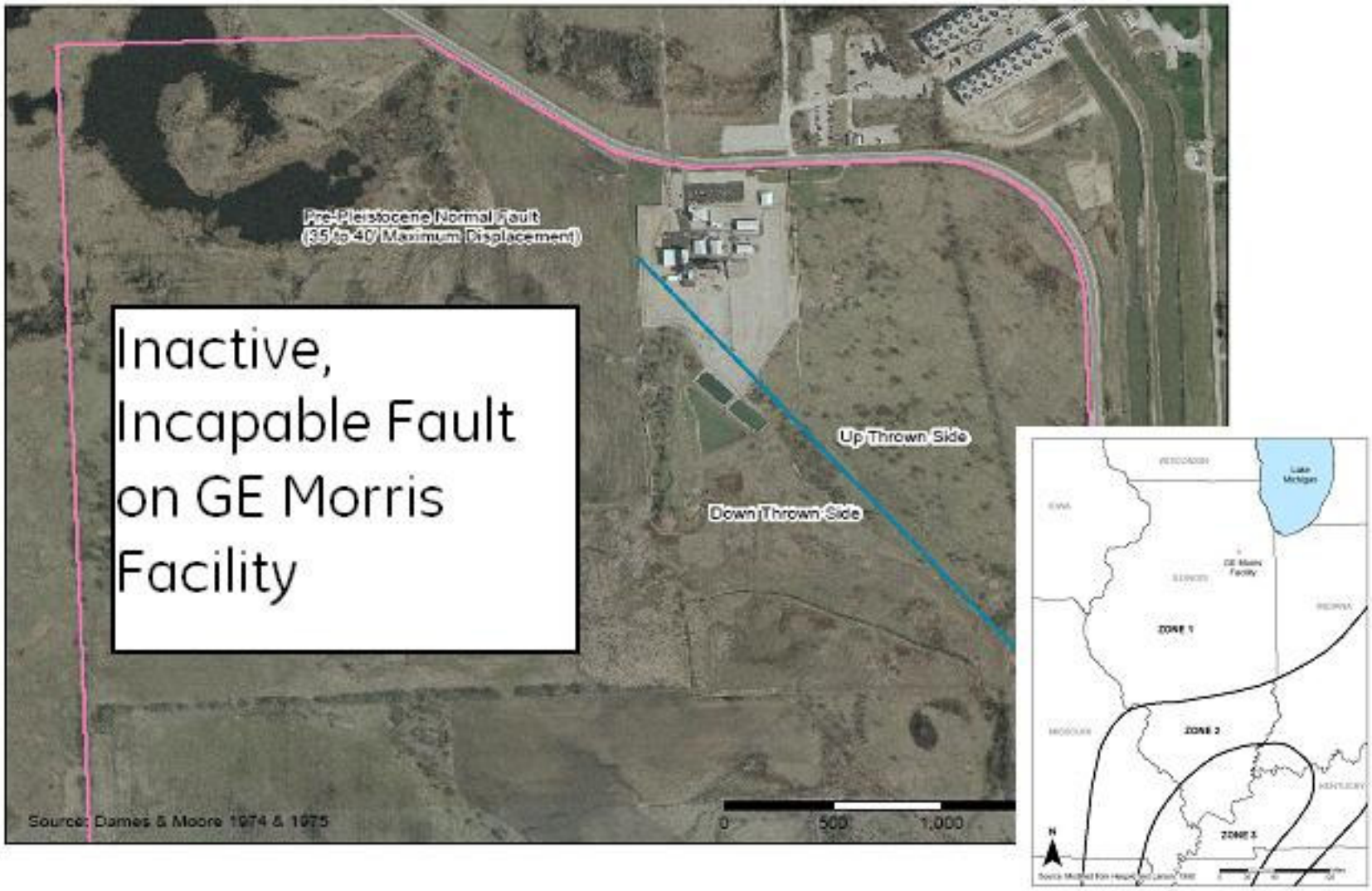


Inactive, Incapable Fault on GE Morris Facility

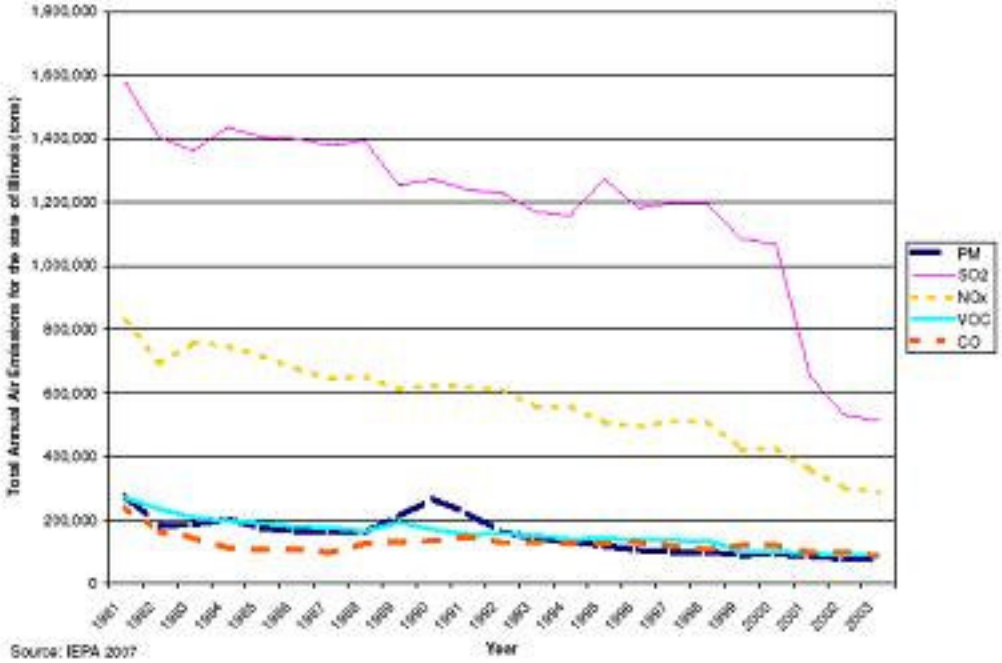
10. Weather/Climatology/Air Quality

- Grundy County, where GE Morris site is located, is in a temperate area; not subject to hurricanes or tropical storms
- Tornadoes are uncommon in Grundy County, only 12 have touched down since 1956. Highest intensity was one F03.
- Goose Lake Township is in non-attainment area for ozone and particulates

10. Weather/Climatology/Air Quality

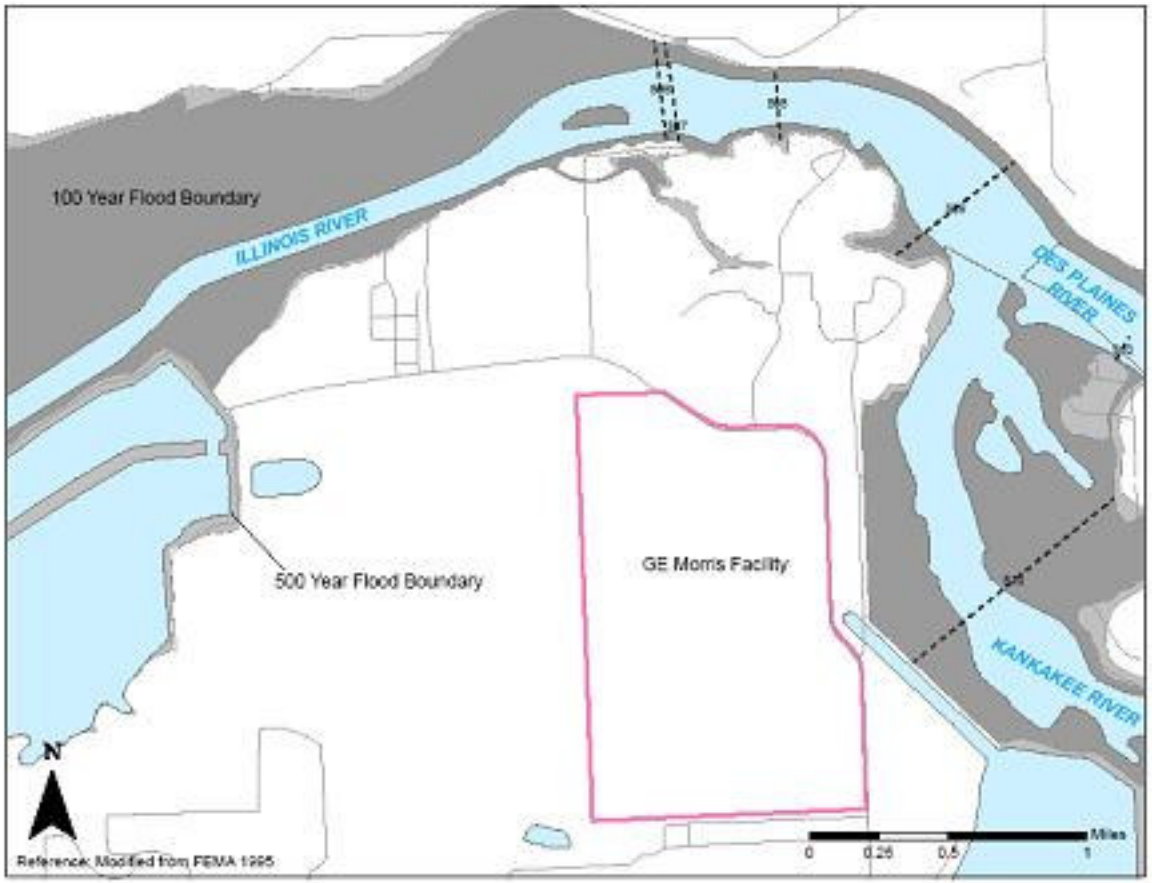
Chicago Ozone and $PM_{2.5}$ nonattainment zone

Downward trend for major air contaminants



11. Hydrology

GE Morris facility outside of 100 and 500 year floodplains



12. Regulatory and Permitting

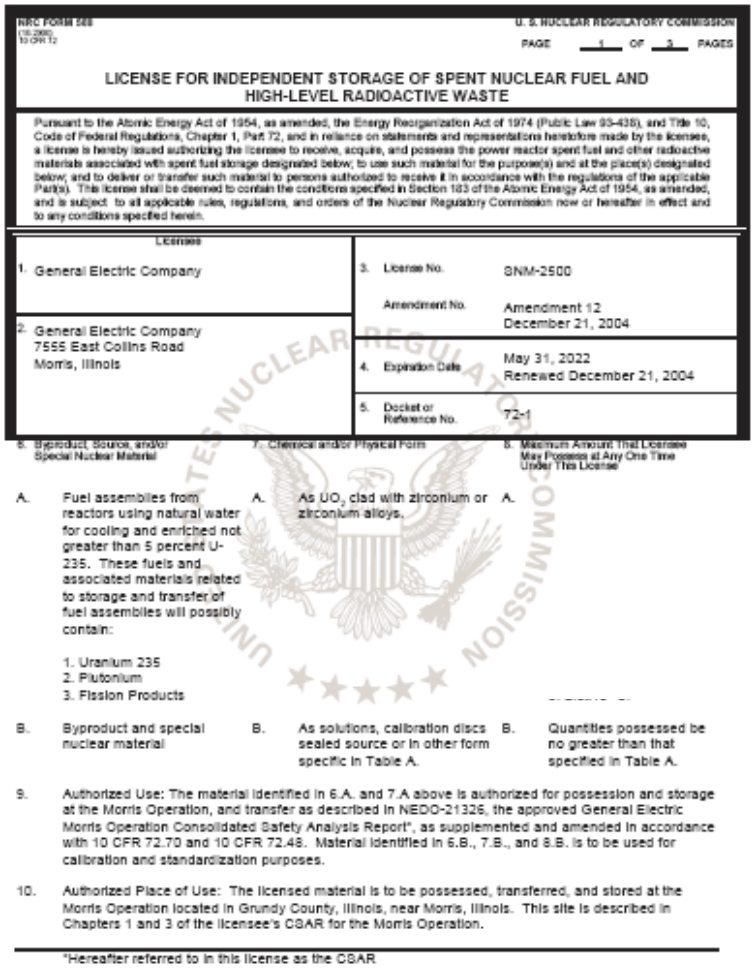
- Various permits will be required for construction and operation:
  - US NRC License for Reactor
  - US NRC License for Fuel Facility
  - IEPA
    - Air
    - Water (NPDES, Storm Water)
    - Hazardous Waste (RCRA)
  - Local County Construction Permits
  - others

13. Construction Cost

Evaluation indicates that current construction costs in Morris and Chicago are approximately 1% higher than national average.

14. Storage capability

The proposal does not include increasing storage capacity (Morris Facility will continue at its current license limit). In addition, the site is essentially full at this time.



NRC FORM 588 (10 CFR 72) — U. S. NUCLEAR REGULATORY COMMISSION

PAGE 1 OF 3 PAGES

LICENSE FOR INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE

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Licensee

1. General Electric Company

2. General Electric Company
7555 East Collins Road
Morris, Illinois

3. License No. SNM-2500

Amendment No. Amendment 12
December 21, 2004

4. Expiration Date May 31, 2022
Renewed December 21, 2004

5. Docket or Reference No. 72-1

6. Byproduct, Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum Amount That Licensee May Possess at Any One Time Under This License
A. Fuel assemblies from reactors using natural water for cooling and enriched not greater than 5 percent U-235. These fuels and associated materials related to storage and transfer of fuel assemblies will possibly contain: 1. Uranium 235 2. Plutonium 3. Fission Products	A. As UO_2 clad with zirconium or zirconium alloys.	A.
B. Byproduct and special nuclear material	B. As solutions, calibration discs sealed source or in other form specific in Table A.	B. Quantities possessed be no greater than that specified in Table A.

9. Authorized Use: The material identified in 6.A. and 7.A above is authorized for possession and storage at the Morris Operation, and transfer as described in NEDO-21326, the approved General Electric Morris Operation Consolidated Safety Analysis Report*, as supplemented and amended in accordance with 10 CFR 72.70 and 10 CFR 72.48. Material identified in 6.B., 7.B., and 8.B. is to be used for calibration and standardization purposes.

10. Authorized Place of Use: The licensed material is to be possessed, transferred, and stored at the Morris Operation located in Grundy County, Illinois, near Morris, Illinois. This site is described in Chapters 1 and 3 of the licensee's CSAR for the Morris Operation.

*Hereafter referred to in this license as the CSAR

15. Other facilities

- Numerous sites listed in environmental databases within 5 miles of GE Morris facility
  - Most northwest of GE Morris, across river
  - None appear to present a risk to GE Morris Site
- No major airports located within 10 miles of GE Morris facility
  - A variety of small public and private airports were identified

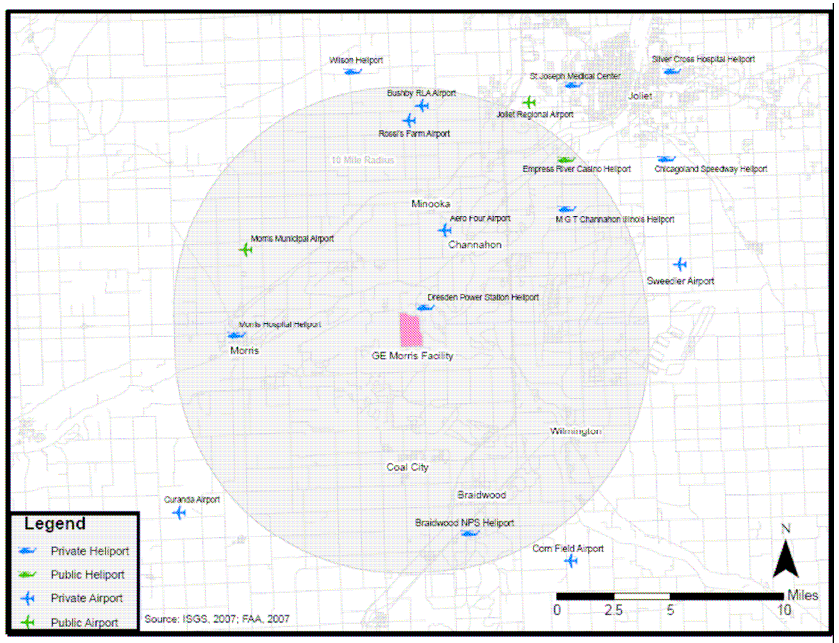


Figure 1.5.3-1. Airports in 10-Mile Radius of GE Morris Site

16. NPL or CERCLIS

Site is not on either:

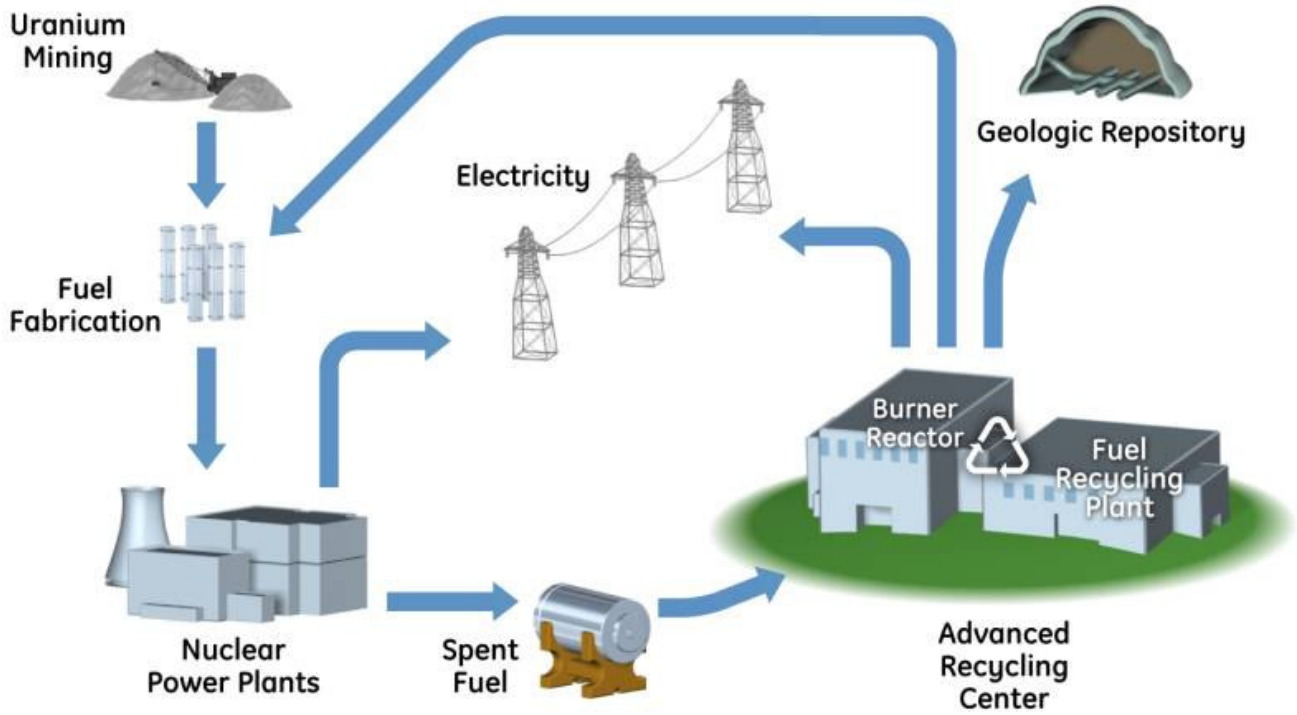
- National Priority List or
- Comprehensive Environmental Response, Compensation and Liability Information System

GE's Morris Site

Advantages for Deployment…

- Existing NRC license
- Existing infrastructure-pool, canyon
- Existing LWR SNF bundles
- Transportation issues eliminated for demonstration facility
- Located near an area with increasing demand for power
- State of IL has tremendous human resources:
  - -University of Illinois
  - -Argonne National Lab,
  - -Fermi Laboratory
  - -Operating Nuclear Plants
- Provides an environmentally sound site to support an advanced recycling center and advanced reactor

GE's Vision for Morris



Advanced Recycling Center (ARC)

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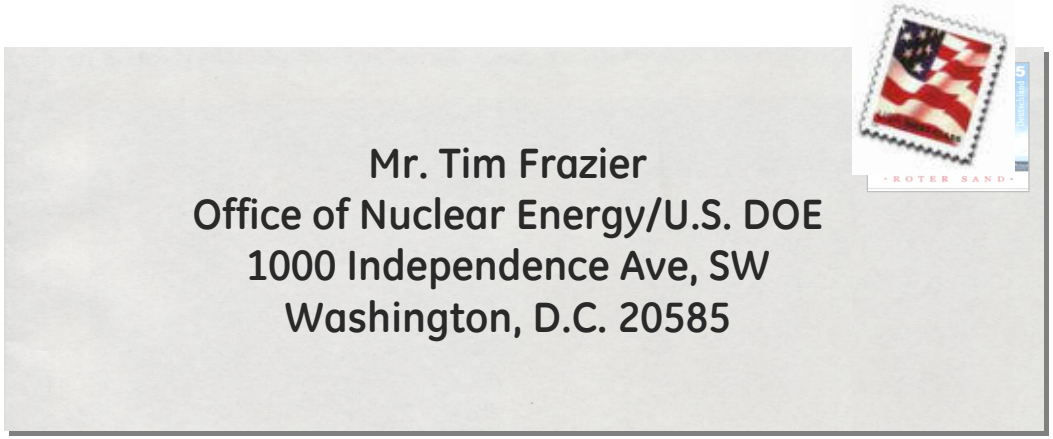
PRISM…

- Simple Operation
- Highly Reliable and Passively Safe
- Simplified O&M
- Modular/Scalable Deployment

How to Provide Your Comments

- By U.S. mail ➔



- By e-mail:
  GNEP-PEIS@nuclear.energy.gov
- By telephone: Toll free 866-645-7803
- By fax: Toll free 866-645-7807
- For more information visit:
  www.gnep.energy.gov

Disclaimer

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